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THE ASCENT OF MOUNT HAYDEN.

A NEW CHAPTER OF WESTERN DISCOVERY.



ON THE MARCH.

I WAS never fully satisfied with my explorations of the Upper Yellowstone region in 1870. What I then saw, and the discoveries made by Dr. Hayden's Geological Corps in 1871, begot in me the desire again to visit that Wonderland, with a view more fully to examine the surroundings of those particular localities which had so greatly excited the curiosity of the public. Our distress at the loss of a comrade,* and the little time we had for extended observation and careful description of what we saw, convinced me that the half had not been seen or told of the freaks of nature in this secluded wilderness. One of the most remarkable as well as valuable discoveries—the Mammoth Hot Springs at

Gardiner River—was reserved to be the grandest trophy of Dr. Hayden's Expedition. It was with the hope, therefore, that I might more fully comprehend what I had seen, and aid somewhat in the discovery of other wonders, that I concluded to avail myself of an invitation from Dr. Hayden to join his U. S. Geological Survey in July last, and accompany it in its visit to the National Park.

With a view to explore the country south of the Yellowstone, and especially in the immediate vicinity of Snake River,—of which so many, almost fabulous, stories had been told,—Dr. Hayden placed his assistant, Captain James Stevenson, in charge of a part of his company, with instructions to approach the Park from that direction, while he, with the other members of the expedition, should proceed over the route of the previous year

* See "Thirty-seven Days of Peril;" SCRIBNER'S for November, 1871.

by way of Fort Ellis, up the Yellowstone River. Both parties were to meet in the Upper Geyser Basin of the Fire Hole River. This southern route had peculiar charms for me. It lay through a region practically unexplored, which must in a few years be penetrated by railroads and filled with people. It was now full of wild streams, vast lava beds, desolate sand tracts, mountain lakes, and long ranges of lofty mountains,—amid which the Snake River, true to its name, pursued its serpentine course to the Pacific, overlooked for hundreds of miles by the lofty range of Tetons, so long and widely known as the great landmarks of this part of the continent.

The company under Captain Stevenson's command had been several days at Fort Hall, in the Territory of Idaho, making preparation for their departure, before I joined it. I arrived at Ross's Fork, a station on the stage road from Utah to Montana, on the morning of our national anniversary. An ambulance which had been sent from Fort Hall for my use was in waiting, and I left almost immediately upon my arrival for that post. Lest the present Fort Hall should be mistaken for the old fur-trader's post of the same name, built by Nathaniel Wyeth as long ago as 1832, it is proper here to state that it is a new government fort, erected within the past three years, some forty miles distant from the ruins of the ancient post whose name it bears. Mount Putnam, named after the commandant of the fort, lifts its snow-crowned peak on the right to the height of 13,000 feet. Scarcely less conspicuous or majestic than the Tetons, apparently a member of the same range, it gives dignity and grandeur to the landscape whose features it overlooks.

All our preparations being completed, the morning of the twelfth day of July was designated by Capt. Stevenson for our departure. Captain Putnam, to whom we had been under repeated obligations during our stay at the fort, afforded us all possible assistance. The boys were roused early, and the work of packing commenced. Great skill is required to perform this labor well and adroitly. Our packers were adepts in the art, and it was marvelous to witness with what precision and celerity they threw, looped, and fastened the lash-ropes around the body of a pack-mule, by what is known as the "diamond hitch." The pack-saddle, when firmly secured to the back of a mule, bears no small resemblance to the common saw-buck of the street wood-sawyer, the four horns corresponding to the four upright projections of the cross-pieces. Every part of it

is made available for transportation. Tents, cooking utensils, clothing, engineering instruments, photographic apparatus, everything that enters into the outfit of any expedition through an unexplored region, is fastened to it with ropes, and the cincho, to which is attached the lash-rope, thrown around the whole. It would astonish any one who beheld the process for the first time, to see what immense loads may be packed upon the backs of horses and mules, in a compass sufficiently small to avoid serious collision with rocks and trees along the bridle-paths and trails through the forests and fastnesses of the mountains.

By ten o'clock our animals were packed and awaiting the order to start. The members of our party were each mounted on a strong horse, and as we passed out of the sally-port of the fort and descended into the valley, our appearance, to an eastern eye, would have been picturesque enough.

We left Mr. Adams and Mr. Nicholson at Fort Hall; the former to follow us on the fifteenth and overtake us by hard riding,—the latter to take observations and determine the latitude and longitude of the Fort.

Moving on to Blackfoot Creek, a tributary of Snake River, we made an early camp.

Our train was in motion early the next morning, and we traveled leisurely over an arid and sandy plain, destitute of water. The heat towards mid-day became very oppressive, and our thirst intolerable. We had neglected taking a supply of water in our canteens, and until we reached Sandy Creek, a tributary of the Blackfoot, none could be obtained. Our animals suffered greatly, and towards the close of the day's journey were with difficulty urged forward. A fine greyhound, which had been presented to Capt. Stevenson by Capt. Putnam, fell from thirst and exhaustion and died upon the trail; and another would have suffered a like fate had not his master dug a hole through the sand into the damp clay and half-buried him in it, while a comrade rode at full speed to Sandy Creek and returned with water to relieve the suffering animal. Just before we reached Sandy Creek a light rain came on, and we caught a few drops in our rubber ponchos, which greatly invigorated us. Our poor animals, too, seemed to gather new life as they felt the grateful moisture. I do not remember ever to have experienced the effects of thirst more than during this day's march. We made but fifteen miles advance, but the day was nearly spent when we went into camp.

Our camp at this place was in the midst of

a miniature desert, and we left it as soon after daylight the next morning as possible. Pursuing our way through the sand, at noon we arrived at Eagle Rock Bridge, the point where the stage-road to Montana crosses Snake River. Here we see one of the remarkable features of this remarkable river,—its passage through an immense table of trap-rock, where it is narrowed from a width of four or five hundred yards to less than thirty, while its depth cannot be measured with a plumb and line. It is like a river set up on edge, and boils, whirls, and surges in its course like Niagara. The water is almost of an inky blackness, and seems to take its hue from the dark chasm through which it passes. The bridge is thrown across the narrowest place; and though not greatly elevated above the water, such is the fury of the stream beneath it that one is very glad to feel that he has crossed it in safety. The same peculiarity which marks this locality may be seen on a much grander scale at the Dalles of the Columbia in Oregon, where that river has worked a channel of about one hundred feet in width and fifteen miles long through a table of trap-rock. Curious erosions have been wrought by the elements in the rocks in this vicinity. They are full of pot-holes, and give a strange appearance to the immediate landscape. In many places where the rocks have been broken so as to divide the orifices, they are very jagged, and seem more like the work of man than of nature.

On our arrival at Taylor's Bridge we were obliged, before going further, to determine whether we would follow up the main stream of Snake River or cross the country directly to the north of Henry's Fork. We had about concluded upon the latter course when a trapper known as "Beaver Dick," who had just left the North Fork, informed us that we could ford the river above the Teton branch, but that the South Fork was impassable,—thus confirming our good judgment in selecting the route to the North Fork. Accordingly we renewed our march in the afternoon, and camped at a point five miles north of the Bridge.

Our route the next day was by the stage road to the station known as Market Lake. The marsh upon our left swarmed with musquitoes, and the weather being very hot, we passed a tedious day. Tortured by these insects, our two burros stampeded with their packs and gave us a three-mile chase. The mail-coach came up soon after we encamped, bringing Mr. Adams, who had letters and papers for nearly all our boys.

This portion of Snake River valley was pretty thoroughly explored by Lieutenant Mullan in the winter of 1853-4. When he visited it, Market Lake, now a dry sandy depression in the prairie, was a large and beautiful sheet of water twelve or fourteen miles in length. He traveled along its margin for more than eight miles, and then diverged to Snake River. He was told by trappers and others that the lake had been formed but a few years; that before its formation its bed was an immense prairie bottom, and the favorite resort for game of all kinds. The old mountaineers held it in high repute as a hunting-ground,—and whenever their provisions failed, always joined each other in an expedition to this favorite spot, which was known among them as "the market." "Let us go to market," was an invitation which was understood among trappers to indicate a desire to renew supplies from this ever-bountiful resource. Captain Mullan gave it the name of Market Lake, to perpetuate what he at that time supposed was a legend connected with it;—but could he see the dry and arid plain which it presents to the eye to-day, all doubt of its early uses would be dispelled. A freak of the subterranean streams, not less strange and unaccountable than that which filled it and converted it into a magnificent lake, has now emptied it, and changed it into a forbidding desert.

We bade farewell to civilization at daylight on the morning of the 16th, and plunged into the rocky wilderness which lay between us and the North Fork. Never before had this desolate clime echoed to the clatter of so large and gay a company. Thirty-seven mounted men and twenty-five pack animals could hardly fail to disturb the unbroken slumber of a region which, from every rock and tree and mountain, answers to the faintest sound with reduplicated murmurs. But as we looked before us and beheld, rising through the morning vapors, the glinting sides and summits of the Tetons, we felt that even this country, desolate and virgin as it was, had a thrilling history. Those grand old mountains covered with eternal snow had, by their very isolation, pointed the way to the Pacific to all the early explorers, from the days of Lewis and Clarke, through the mountain passes and river mazes of this the most intricate part of the continent. Guided by them, Hunt in 1811 led his little half-starved band out of the almost inextricable wilderness of the Bighorn Mountains, and pursued his long and tortuous journey to the Columbia. Often did they serve during his years of wan-

dering to guide Bonneville to the friendly wigwams of the Bannacks or Shoshones. And in the recent history of the country, the first sight of them has often assured the perplexed gold-hunter that he was on the right path to the Northern Eldorado. Rough, jagged, and pointed, they stood out before us nearer than I had ever before seen them, shining like gigantic crystals in the morning sunbeams. As I gazed upon the loftiest peak of the three, and followed up its steep and rock-ribbed sides to their acute summit, I tried to calculate the risks of our contemplated clamber, and communed with myself as to the possibility of its successful achievement. The outline of the mountain from this point of view presented so many concave reaches and precipitous ascents, that I began to regard as impossible the attainment of its top; and yet, as an achievement as well for the expansive and magnificent view to be obtained from it as for any renown it might give, it seemed to me to be worthy of the greatest risks and strongest efforts. Beaver Dick told us, that though many times attempted, the ascent of the great Teton had never been accomplished. And this was the opinion of the Indians. Indeed, as late as the visit of Captain Reynolds to this region in 1860, the opinion was prevalent that the Tetons were surrounded by a tract of country so full of rocks and wild streams and perpetual snows as to be entirely inaccessible.

Mr. Hunt bestowed upon them the name of Pilot Knobs, because of the frequent benefit he derived from them as landmarks, though previous to his time they had received from the early French explorers the name they now bear of Tetons, from their similarity in form to the female breast. But 'tis distance that lends enchantment to such a view of these mountains, for when nearly approached, those beautiful curvilinear forms that obtained for them this delicate appellation become harsh and rugged and angular; and the comparison used by Professor Hayden, of "Shark's teeth," to represent their appearance, is more truthful and striking. The name is a misnomer, and if instead—as some

insist is the case—they had been called the three Titans, it would have better illustrated their relation to the surrounding country.

Our course was through a treeless, desolate country of sand and rock, marked by few great inequalities of surface, and well calculated for railroad improvement. After traveling seventeen miles we reached the North, or Henry's Fork of Snake River, so named after the first fur-trader who crossed the Rocky Mountains and established himself in this country.

We camped near the base of two high buttes, whose peculiar formation excited our curiosity. With every external appearance of basalt, they were as soft and friable as sandstone. An impromptu party, of which the writer was one, left camp for the purpose of exploring these singular Knobs. Ascending the most northerly of the two to the height of nearly a thousand feet, they quite unexpectedly found themselves standing upon the igneous rim, not more than fifty feet in width, of an enormous crater, whose yawning depth of three hundred feet, and widely extended jaws of a thousand feet or more, left no doubt as to the original character of the mountain. It was an extinct volcano. The rim of the crater, broken in the direction of our camp, denoted the course of the lava, and our geologist gave as a reason for its resemblance to sand-rock, that the overflow had occurred under water, which produced disintegration, and the particles on reuniting formed a volcanic sandstone. From the extreme rareness of its occurrence, this discovery, next to that of the "Quebec Group," was deemed the most important of the expedition. We descended at an angle of about 45°



"KEMILWORTH CASTLE."

into the crater, the bottom of which was covered with sage-brush and bunch-grass.

Looking up from this interior at the rim, its various erosions, fissures, and inequalities of blackened masses presented a most grotesque appearance. Externally the lava on the mountain sides assumes a great variety of fantastic forms, prominent among which are those of numerous ovens with lofty chimneys, interspersed among turrets, castles, spires, keeps, and towers. The view from the rim commands a vast extent of country. On the south we behold the valley of the great Snake River, blackened with the huge and shapeless masses of basalt scattered over it, and the doublings and twistings of the mighty river itself as it struggles with a thousand impediments on its sinuous course to the Pacific. Eastward, Henry's Fork and its tributaries emerge into view from the mountains and hasten across the plain to their union with the Snake, while all around us the distant horizon is decked with isolated peaks and interminable ridges.

Among the strangely fretted rocks near the base of this volcano, was one which Mr. Adams called "Kenilworth Castle," from the resemblance it bore to that ruin. Upon that portion of it corresponding to the banquetting hall, we found an Indian inscription, which doubtless was intended to perpetuate incidents in the life of some successful hunter. As the rock was soft, the inscription could not have been very ancient. It represented buffalo-hunts, encounters with the grizzly, slaying of deer, elk, and moose,—cranes, mounted hunters and hunters on foot, all sufficiently accurate for identification. I have seen upon the elk and buffalo robes of the Blackfeet many inscriptions of like character; and with that nation more perhaps than any other, it is a custom by some means to perpetuate the memory of their great chiefs, and great events in their history. I conclude from the fact that the Blackfeet, within the past half century, were the most warlike tribe in the vicinity of this inscription, that it was the work of one of their famous hunters.

Among our own hunters was a trapper named Shep Medary—a lively, roystering mountaineer, who liked nothing better than to get a joke upon any unfortunate "pilgrim" or "tender foot" who was verdant enough to confide in his stories of mountain life.

"What a night!" said Shep, as the moon rose broad and clear—"what a glorious night for drivin' snipe!"

Here was something new. Two of our

young men were eager to learn all about the mystery.

"Driving snipe! what's that, Shep? Tell us about it."

"Did ye never hear?" replied Shep, with a face expressive of wonder at their ignorance. "Why, it's as old as the mountains, I guess; we always choose such weather as this for drivin' snipe. 'The snipe are fat now, and they drive better, and they're better eatin' too. I tell you, a breakfast of snipe, broiled on the buffalo chips, is not bad to take, is it, Dick?"

Beaver Dick, who had just arrived in camp, thus appealed to, growled an assent to the proposition contained in Shep's question; and the boys, more anxious than ever, pressed Shep for an explanation.

"Maybe," said one of them, "maybe we can drive the snipe to-night and get a mess for breakfast: what have we got to do, Shep?"

"Oh well," responded Shep, "if you're so plaguery ignorant, I'm afeard you won't do. Howsomever, you can try. You boys get a couple of them gunny-sacks and candles, and we'll go out and start 'em up."

Elated with the idea of having a mess of snipe for breakfast, the two young men, under Shep's direction, each equipped with a gunny-sack and candle, followed him out upon the plain, half a mile from camp, accompanied by some half-dozen members of our party. The spot was chosen because of its proximity to a marsh which was supposed to be filled with snipe. In reality it was the swarming-place for mosquitoes.

"Now," said Shep, stationing the boys about ten feet apart, "open your sacks, be sure and keep the mouths of 'em wide open, and after we leave you, light your candles and hold 'em well into the sack, so that the snipe can see, and the rest of us will drive 'em up. It may take a little spell to get 'em started, but if you wait patiently they'll come."

With this assurance the snipe-drivers left them and returned immediately to camp.

"I've got a couple of green 'uns out there," said he with a sly wink. "They'll wait some time for the snipe to come up, I reckon."

The boys followed directions,—the sacks were held wide open, the candles kept in place. There they stood, the easy prey of the remorseless mosquitoes. An hour passed away, and yet from the ridge above the camp the light of the candles could be seen across the plain. Shep now stole quietly out of camp, and, making a long circuit, came up behind the victims and, raising a war-whoop, fired his pistol in the air.



THE SNIP-HUNTERS.

The boys dropped their sacks and started on a two-forty pace for camp, coming in amid the laughter and shouts of their companions.

Beaver Dick pitched his "wakiup" near our camp, and, with his Indian wife and half-breed children, added a novel feature to the company. Dick is quite a character, and during the time he spent with us displayed personal traits that would make him a fitting hero for a popular dime-novel. He is an Englishman, has been engaged in trapping for twenty-one years, is perfectly familiar with all the accessible portions of the Rocky Mountains, and has adopted many of the habits and pursuits of the Indians. He, however, has made it a point twice a year to visit some civilized region in order to dispose of his furs and obtain supplies. We must depend upon his guidance in fording streams, crossing mountain passes, and avoiding collision with unfriendly tribes. His children are already great favorites with our company, and his dusky wife seems a quiet, inoffensive

creature, whose highest ambition is to learn how best to serve her lord and master.

Under his guidance, we broke camp at early dawn and followed up the valley of Henry's Fork, which we crossed in safety at the ford. The task was not accomplished without difficulty, as the bank of the stream where we entered it was very abrupt and the current very rapid. It required great care to prevent the smaller pack-animals from being swept away. The water in the channel mounted nearly to their backs. A dog belonging to one of the company was carried yelping down the stream, out of sight, and we supposed it was lost. It made its appearance in camp two hours afterwards, sadly humiliated by the adventure. The stream was full of the large salmon-trout peculiar

to all streams flowing into the Pacific; several that we caught weighed from two to three pounds each. In form and appearance these beautiful fish resemble the brook-trout, but they are very much larger, and, except in single instances, the spots upon them are brown instead of crimson. The flesh is a rich salmon color, and extremely delicate. If cleaned and cooked while fresh from the water, they furnish a delicious meal.

Among our riding-horses was a little cream-colored cayuse, which after fording the stream, performed the extraordinary feat of bucking completely out of his saddle while it was fastened upon him by cincho and breast-strap.

The poor fellow who mounts a bucking cayuse without knowing how to manage it, is very sure to be thrown over its head or slipped over its haunches, at the infinite risk of breaking his neck or being kicked to death. But with a man on its back who knows how to avoid these calamities, there is something ludicrous in the wrathful leaps and vicious dodges of the animal.

The little ponies, which take their name from the Cayuse Indians, possess, as a native quality, this habit of bucking, or jumping high in air as we have seen lambs do, striking, with every joint stiffened, all four feet forcibly upon the earth. The concussion is so violent that, unless the rider is experienced, one or two efforts will be enough to dash him to the ground. The very appearance of the animal is frightful. The ears are thrown back close to its head, the eyes put on a vicious expression, it froths at the mouth, seizes the bit with its teeth, tries to bite, and in every possible manner evinces the utmost enmity for its rider. Bucking is deemed as incurable as balking—whip and spur and kind treatment being alike in vain.

Mr. Adams left the camp the morning after our arrival, in company with Shep Medary, on a hurried return to Fort Hall, to procure more pack animals, and recruit our waning stock of supplies. Growing in great profusion all around our camp, we were delighted to find those articles of food so much prized by the Indians—the camas and yamph roots. The camas is both flour and potatoes for several wandering nations; and it is found in the most barren and desolate regions in greatest quantity. The camas is a small round root, not unlike an onion in appearance. It is sweet to the taste, full of gluten, and very satisfying to a hungry man. The Indians have a mode of preparing it which makes it very relishable. In a hole of a foot in depth, and six feet in diameter, from which the turf has been carefully removed, they build a fire for the purpose of heating the exposed earth-surface, while in another fire, at the same time, they heat a sufficient number of flat rocks to serve as a cover. After the heating process is completed the roots are spread over the bottom of the hole, covered with the turf, the heated rocks spread above, a fire built upon them, and the process of cooking produces about the same change in the camas that is produced by roasting in coffee. It also preserves it in a suitable form for ready use.

The yamph is a longer and smaller bulb than the camas, not quite as nutritious, and eaten raw. Either of these roots contains nutriment sufficient to support life; and often, in the experience of the tribes of the mountains, winters have been passed with no other food. There is a poison camas, which is sometimes mistaken for the genuine root, that cannot be eaten without fatal results. It always grows where the true camas is found, and much care is necessary to avoid mixing

the two while gathering in any quantity. So great is the esteem in which the camas is held, that many of the important localities of this country are named after it.

The great theme of talk about our camp-fire was the proposed ascent of the Tetons. Beaver Dick said our design was not new. The ascent had been often tried, and always without success. An old trapper by the name of Michaud, as long ago as 1843, provided himself with ropes, rope-ladders, and other aids, and spent days in the effort, but met with so many obstructions he finally gave it up in despair. "You can try," said Dick, significantly; "but you'll wind up in the same way."

After a ride of ten miles, we arrived at mid-day at the Middle Fork of the Snake, or the Mad river of Mr. Hunt. It is not as large as the North Fork, but much more rapid. All day the Tetons reared their heads in full view. From the summit, midway to the base, they seemed to be covered with perpetual snow. In the buttressed sides, as the eye scanned them critically, many places were seen where the rocks were nearly vertical, and which it would be impossible to scale. They were apparently intrenched in a wilderness of rocks, as inaccessible as their summits.

Our camp, the next day, was thirteen miles nearer the Tetons, which assumed a loftier appearance and seemed more distant than ever.

We followed up Conant's Creek another day over high, rolling ridges and through deep coulees, which were filled with groves of small poplars. These thickets afforded fine retreats and shelter from the weather for elk, deer, and bear, though our hunter, who came in empty at night, complained bitterly that the country is destitute of game. Looking at the mountain ridge, near the source of Middle Fork, a depression there suggested the practicability of a railroad from Snake River to the Geysers.

On the following day we pushed forward to the Big Cottonwood, a stream fed by the melting of the snow in the gorges of the mountains. Its banks were full, and the stream was a perfect torrent. Beaver Dick told us that it is generally dry from the point where we are camped to its mouth at this season. These snow streams in the mountains are very common, and in mining countries they often afford the only means of developing the richest gold placers.

Just below our camp we found a patch of strawberries, a luxury which none appreciate more highly than those who have been living

upon canned fruits and bacon. The rich bunch-grass in the bottoms and foot-hills contrasted strangely with the rock pasture we left behind us. We seemed to have entered a region of plenty. Our hunter killed an antelope, and we feasted upon fresh steaks. But we made slow progress, on account of the great number of badger and prairie-dog holes.

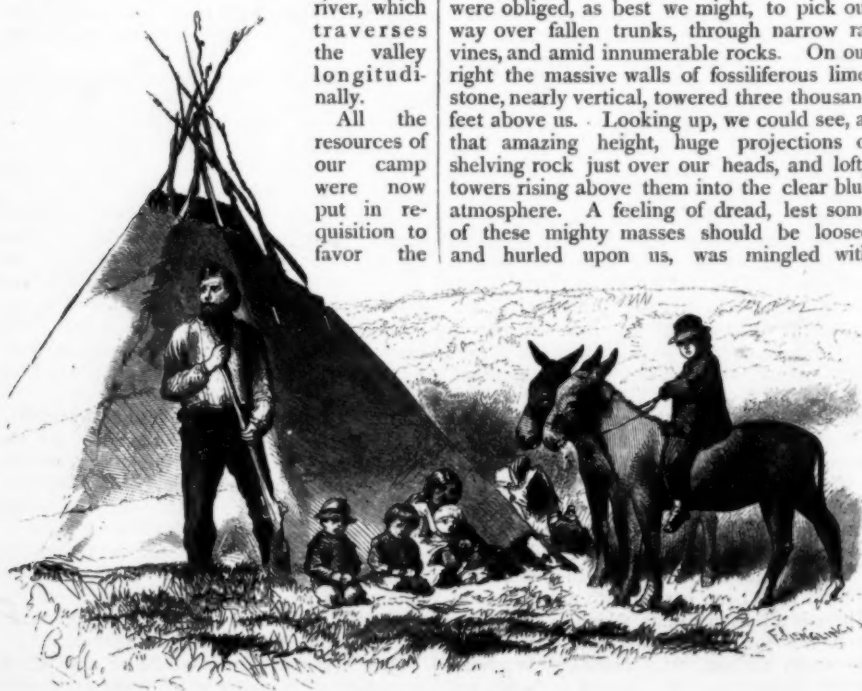
Eight miles of difficult travel took us fairly into the Teton basin. This basin, hid away among the mountains, is like an oasis in the desert. It embraces an area of about eight hundred square miles, and is carpeted with the heaviest and largest bunch-grass I have ever seen. It is bounded on three sides by a range of snow-capped mountains, and forms a complete *cul-de-sac*. Camas and yamph grow all over it in great abundance, and in the lowlands and along the streams are found large patches of strawberries of the finest flavor. Our entrance into this valley was effected by traveling over high table-lands and rolling foot-hills, which for a distance of twelve or fifteen miles were covered with vegetation. Innumerable crystal streams flow from the surrounding mountains into

the Teton river, which traverses the valley longitudinally.

All the resources of our camp were now put in requisition to favor the

ascent of the Great Teton. Mr. Adams, who had returned to Fort Hall from North Fork, was daily expected. He was to bring with him barometric instruments necessary to determine the altitude of the lofty peaks. Mr. Stevenson and the writer concluded to occupy the time until he should arrive in a preliminary reconnaissance of the mountains. Accordingly, on the morning of the 24th of July, after an early breakfast, we mounted our horses and proceeded up the cañon above our camp. Following the main stream, we passed in the distance of three miles thirty or forty beautiful cascades. For that entire distance the walls of the cañon seemed full of their reverberations. Many of them were fashioned by the descent of lateral streams into the main Teton, and followed each other in almost continuous succession down the rocks. Their noisy laughter (we could not call it roar) was the only sound that broke the silence of the chasm through which we were passing. On every hand we saw them through the pines, at a height of thousands of feet, veiling the rocks and leaping into pools of foamy whiteness.

There was no trail up the cañon, and we were obliged, as best we might, to pick our way over fallen trunks, through narrow ravines, and amid innumerable rocks. On our right the massive walls of fossiliferous limestone, nearly vertical, towered three thousand feet above us. Looking up, we could see, at that amazing height, huge projections of shelving rock just over our heads, and lofty towers rising above them into the clear blue atmosphere. A feeling of dread, lest some of these mighty masses should be loosed and hurled upon us, was mingled with



BEAVER DICK AND HIS FAMILY.

those sublimer emotions which this spectacle evoked.

While we were riding carelessly along, a black bear rushed from behind a rock and ran on before us. We gave it instant chase, but the ground being covered with bowlders, it soon distanced us, and coming to a tree which had fallen across the stream, it ran across the trunk to the opposite side. In attempting to ford the stream in pursuit, the rapidity of the current nearly swept my horse from his feet. He was swung around among the bowlders, and in extricating himself tore a shoe from his foot. A second effort enabled me to reach the other side, but Bruin, meantime, had escaped.

In traveling the distance of ten miles from our camp, we had accomplished an ascent of two thousand feet, when we struck the line of snow. Our horses were tired out, and the ravine up which we had advanced was now so full of rocks and bowlders as to render further progress on horseback impossible.

We lariatd our horses, and proceeded to clamber over the immense granite bowlders that jutted from the side of the chasm. The frequent scratches and ridges apparent upon the surface of the larger rocks bore incontestable evidence that in the long ago some mighty glacier had pushed its way through opposing mountains, and left this long ravine to mark its track to the valley. Above the granite and overlying it, we found a stratum of gray sandstone, fragments of which were scattered over the sides of the ravine. Still above this was a superincumbent mass of lava, several hundred feet in thickness.

Following in the direction of the Tetons, which were hidden by intercepting rocks, after three hours' scrambling over yawning precipices, immense bowlders and vast snow-fields, we stood upon the summit of the ridge, at an elevation of 10,500 feet above ocean level. Expecting here to find ourselves upon a plateau which stretched to the base of the mountains, what was our disappointment at beholding, between us and it, an immense gorge with perpendicular sides, two thousand feet deep, and more than three thousand feet in width. A field of snow of measureless depth concealed the bottom of the chasm, and the hollow murmur of a creek which struck our ears seemed to come from the center of the earth. It must have been at least twelve hundred feet beneath the surface of the snow. On the right, in the midst of the snow-field, was a large lake of marvellous beauty. Upon its dark blue bosom swans and other aquatic fowl were sporting.



A BUCKING CAYUSE.

We named this sheet of water Lake Cowan, in honor of Hon. B. R. Cowan, Assistant Secretary of the Interior. It is located in that portion of the Teton range known among the early trappers as Jackson's Hole.

From our point of observation we discovered a smaller lake, lying at the base of the Tetons, the surface of which was covered with ice and snow. The perspiration occasioned by the severe exercise we had taken soon disappeared before the chill blasts from the mountains, and we found it necessary to shelter ourselves beneath some friendly rocks, whence we made a critical examination of the Great Teton, and the slopes ascending to the ridge or plateau which isolates those three peaks from all surrounding mountains. This immense bench, though not divided by erosions, seems at some former time to have been the base of one enormous mountain, the summit of which, by time and the elements, has been divided into the three Teton peaks. The view from where I stood was unlike any other I had ever beheld: in all the elements of savage grandeur, I doubt if it could be surpassed. Rocks and snow, with a few patches of trees, composed the entire scenery; but these were arranged in such fantastic forms and on so unlimited a scale as to defy all effort at description. It was bewildering—overpowering—but needed something beautiful, something upon which the eye could rest pleasantly, to relieve the stern lineaments everywhere revealed.

The ascent of the Great Teton, to look at the lofty peak of rugged granite, seemed impossible. On either side, the angle at which it rose was apparently a continuous precipice from top to bottom. Even to clamber up the plateau to its base was a labor full of difficulty. After crossing the glacier in the chasm beneath us, we would have to select a pathway up the plateau between the confronting ridges which everywhere swelled from its irregular sides, and crept in tortuous protuberances to its very summit. A mistake in the selection would be fatal to success, and we would be compelled to return and commence anew, for we could not cross laterally from one to another of these walled ravines. Two hours of observation, if they failed to exalt, did not dampen our courage, and we returned to our horses more determined than ever that the enterprise should not fail for want of effort. We selected a spot for a temporary camp, at the first grass we met with while descending the cañon, intending from that point to accomplish the ascent and return in a single day. Night was now approaching, and we hastened towards the camp.

When within three miles of it, we came upon our fearless topographer, Mr. Beckler, who, with a shotgun loaded with small shot, stood face to face with a she grizzly and two cubs, which he had frightened from their lair in the thicket, while in search of smaller game. Fortunately, in attempting to discharge his gun it missed fire, and probably saved him from a deadly encounter with the irritated animal, or a hasty ascent of a tree as a possible alternative. We prevailed upon him to return with us, and await a more favorable opportunity for a tussle with grizzlies.

During our absence two of the boys had felled a tall pine that stood upon the bank of the stream for a foot-bridge, and while

trimming off the branches from the prostrate trunk, contrived to lose the axe in the river, about forty-five feet from the shore. It was the only one remaining in camp, two others having been broken. We could hardly have lost anything so constantly in demand, or so difficult to replace. It had sunk, and in the clear stream lay in full view on the bottom of the river, in the midst of the rapids. The boys had made every effort they could devise to recover it, but in vain, and it was given up as lost. Two other members of our party had killed and brought into camp a good-sized black bear, which is one of the most formidable animals in the Rocky Mountains. We were made aware, by the finding of a flint arrowhead, of the fact that our present camp had, in days gone by, been occupied by Indians. As long ago as the



RESCUING THE AXE.

visit of Lewis and Clarke to this country, the Indian tribes had substituted sheet-iron for flint in the manufacture of their arrow-heads, —the material being supplied to them by the Hudson's Bay Company. Lewis and Clarke, on one occasion, bought several horses with a worn-out joint of stove-pipe. Judging from its appearance, many years must have elapsed since the arrowhead found by us was last in use: so this region, new to us, was long ago the occasional abode of the Indians.

Our party, while awaiting the arrival of Mr. Adams, spent the time in making various scientific observations. The three Teton were found to be thirty miles east of the location assigned to them by all former geographers, and instead of being in Idaho, as generally supposed, were about a mile inside the western boundary of Wyoming.

Mr. Adams, accompanied by Dr. Curtis, the microscopist of the expedition, Shep Medary, guide, and two cavalymen came into camp on the 26th of July. They had trailed our party from Fort Hall, a distance of 130 miles, in four days. A letter received from Dr. Hayden, announced the sudden death of Mrs. Blackmore, the estimable wife of Mr. William Blackmore. This melancholy event occurred at Bozeman, a few days after the arrival of Dr. Hayden's party, of which Mr. and Mrs. Blackmore were members, at that place.

The necessity for making the effort to obtain our axe is the only excuse that can be offered for incurring the risk it involved. But, without the axe, the company were in a condition of helplessness entirely irreparable. The depth of water where it lay was not more than three feet, but it was the very middle of the stream, which was one continuous torrent, and of icy temperature. An attempt made by one of the herders to reach the spot, by riding a horse into the stream, resulted in failure,—the current being too swift for even a horse to maintain his footing among the boulders.

The member of the party who determined to recover it, accompanied by several of his comrades, proceeded to the spot, when, after removing all his clothing except his wrapper, a pair of woolen socks, and a silken handkerchief about his neck, he fastened around his chest a strong rope, the other end of which was passed around a tree which stood upon the bank in a bend of the stream about seventy feet above, and was then intrusted to the stout hands of the wagon-master. The uproar of the water would render verbal communication impossible, from the moment

he entered the stream; so signals were agreed upon, by which the men on shore could understand his wishes. The bottom of the river was composed of smooth cobblestones and slippery boulders,—a most uncertain footing.

Thus prepared, he stepped into the torrent, which every instant threatened to whirl him off his feet. Holding firmly by the rope, his feet braced against the current, his body inclined at an angle of forty-five degrees, he waded sidewise by slow steps, to the spot where the axe was lying. Reaching down to grasp it, he was unable to resist the force of the current by which his arm was impelled below it. Obeying his signal, his comrades drew upon the rope and enabled him to gain a position above the axe. Here he found that in order to reach it, his body must necessarily be submerged, and a loss of footing might be attended with serious consequences. A plunge was made, but the current still swept his arm beyond the axe. A second effort was attended with a like result. At the third plunge he succeeded in firmly grasping the handle. As he raised it, the force of the current against the broad side of the blade turned his body partially around, and in attempting to regain his position he lost his foothold, and was whirled in among the boulders. The rope, drawing over one shoulder diagonally to the shore, forced his head under the water and held it there. Thus extended in the stream, it was impossible to recover an upright position against the powerful rapid,—and he was rolled over and over upon and amid the rocks and boulders, sometimes above, and sometimes beneath the maddened waters, until by the sheer force of the current he was literally driven to the shore, covered with severe bruises and contusions, and nearly exhausted.

As he neared the bank, suffering intensely for want of breath, he made one more determined effort to regain his feet, and, securing a temporary foothold, succeeded in raising his head for an instant above the surface, when he heard from one of his comrades on shore the exclamation, "Well! we've seen the last of *that* axe." The next instant he was again swept among the boulders;—but as he rolled over and the waters closed above him, he raised the axe above the surface of the stream, in full view of his comrades, in mute testimony of the triumph he could in no other manner express. The current was sufficiently strong to sweep from his feet the pair of woolen socks, and untie



PHOTOGRAPHING IN HIGH PLACES.

a hard knot in the handkerchief around his neck. All unpleasant consequences of the undertaking soon yielded to proper treatment.

On returning to camp, I was invited to dine with "Beaver Dick," who had cooked a beaver in the mountain style, and wished to demonstrate its superiority to the ordinary methods of preparing game for the table. I confess that my appetite was not much sharpened,

on being told that the animal had been boiled entire, and that the dressing was all done after the cooking was completed; but the superior flavor of the meat, its succulence and tenderness, convinced me that, squeamishness aside, beaver was all the better

for being cooked according to the civilized method of cooking pigeons.

Mr. Jackson, our persevering photographic artist, took a great number of views of the scenery in this vicinity—including many of the cascades in the Cañon, and the Tetons from all points of the compass. He is an indefatigable worker, and as often camps alone in some of the wild glens as with the company. Give him fine scenery, and he forgets danger and difficulty in the effort to "get a negative."

Our ascending party, fourteen in number, being fully organized, we left camp at 10 o'clock, on the morning of the 28th July, and followed up the cañon nine miles, to the spot chosen for our temporary camp. Here we rested, and dined; after which Messrs. Adams and Taggart ascended a mountain on the left of the camp to a plateau 3,000 feet above it, from which they were able to determine the general features of the route to the base of the Great Teton. That peak rose majestically in the distance above a hundred smaller peaks, its sharp sides flecked with snow, and its bold gray summit half buried in fleecy clouds. It was indeed the lord of the empyrean. Pressing on toward it, they ascended a point of the plateau separated by an intervening chasm of nearly a thou-

sand feet in depth from the elevation over which their pathway lay. The setting sun admonished them that they had barely time to return to camp before dark. They reached there in time to join the boys in a game of snow-balling, a singular amusement for the last days of July.

At half past four the next morning, the thermometer being 11° above zero, the party was aroused, and after partaking of a hearty breakfast, each man provided with an alpine staff, and a bacon sandwich for mid-day lunch, departed from camp, intent upon reaching the topmost summit of the loftiest Teton. The first two miles of the journey lay directly up the cañon, and over countless heaps of fallen trees. This tedious course of travel only terminated to give place to another, still more wearisome, through a ravine, and up a steep acclivity which we were enabled only to ascend by clinging to the points and angles of projecting rocks. Pausing at the summit to take breath, we saw lying between us and the first icy ridge a vast field of snow. Our aneroids showed that we were 9,000 feet above the ocean level—a height which entirely overlooked the walls of the cañon we had ascended, and took in an immense view of the surrounding country. Far as the eye could reach, looking northward, peak rose above peak, and range stretched beyond range, all glistening in the sunbeams like solid crystal. In the immediate vicinity of our position, the eye roamed over vast snow-fields, rocky chasms, straggling pine forests, and countless cascades.

The snow-field over which we next traveled, instead of the smoothness of a freshly-covered plain, was as irregular, as full of hummocks and billows as the rocks beneath it and the storms which for years had swept over it could possibly make it. It presented the appearance of an ocean frozen when the storm was at its height. Clambering over the first ridge, we traveled on in the direction of the second, which obstructed our view of the Tetons. Our route was over huge boulders alternated with snow, and at this hour of the morning, before the sun had visited it, no traveling could be more unpleasant. We found our alpenstocks of infinite service, and we may thank them for the many falls we escaped upon the slippery surface, as well as for the comparative safety of many we made. Two miles of this kind of exercise brought us to the second ridge, which was composed of crumbling rock, and at least six hundred feet above the level of the field we had passed over. The view

from this point was magnificent, but almost disheartening, from the increasing obstruction it presented to our progress. Another stretch of snow, rising to a sharp ridge, lay in front of us, at least five miles in length, across which, in our line of travel, was another upheaval of crumbling rock. On our right, a thousand feet below, was the open, blue Lake Cowan.

Resuming labor, some of our party crawled around the side of the gorge, preferring rather to cross over the snowy ridge on our left, than to descend the slippery side of the elevation upon which we stood. Several projecting ledges of crumbling rock lay between them and the snow, from which, as they passed over them, detached masses rolled down the bank endangering the lives of all below. Mr. Beckler, by a sudden jump, barely escaped being crushed by a large rock, which whistled by him like an avalanche. As he jumped he fell, and rolled down upon an out-cropping boulder, receiving an injury which disabled him. Others of the party slid down the ridge unharmed, and encountered fewer difficulties in their journey along its base than its sides. The snow in the long ridge was at least two hundred and fifty feet in depth, and apparently as solid as the granite it covered. After a walk of more than a mile upon its glassy surface, we made a long descent to the right, and passed over a lake about 600 yards long by 200 wide, covered with ice from twelve to fifteen feet thick. There was nothing about this frozen water to indicate that it had ever been open. The ice which bound it, as well as the snow surrounding, seemed eternal. So pure and clear was this frozen surface, that one could see, even at its greatest thickness, the water gurgling beneath. At the distance from which we first saw it, we supposed this lake lay at the very base of the Tetons, but after we passed over it, there still stretched between us and that point two miles of corrugated snow. Still receding and receding, those lofty peaks seemed to move before us like the Israelites' pillar of cloud, and had we not seen this last snow-field actually creeping up to the top, and into the recesses of that lofty crest, from which the peaks shoot upward to the heavens, we should most willingly have turned our faces campward from the present point of vision, and written over the whole expedition, "Impossible."

There is no greater wonder in mountain scenery on this continent, than the tendency it has to shorten distance to the eye and lengthen it to the feet. A range of moun-

tains apparently ten miles distant may be fifty miles away. A plain, to all appearances as smooth as a floor, is often broken into deep ravines, yawning chasms, and formidable foot-hills. Everything in distance and surface is deceptive.

Beyond the lake we ascended the last rocky ridge, more precipitous than the others, to take a last look at the dreary landscape.

We seemed to be in the midst of an arctic region. All around was snow and rock and ice. Forward or backward everything was alike bleak, barren and inhospitable; but our great labor was still unperformed. Encouraged by the certainty that we were upon the last of those great snow environments which lay at the feet of the mountains, we pushed onward to the base of the immense saddle between them. At this point several of the party, worn out with the day's exertions, and despairing of reaching the lofty summit which still towered five thousand feet in mockery above them, abandoned all further effort. Our kind surgeon, Dr. Reagles, had considerably accompanied us to the base of the ridge, provided with instruments and bandages in case of accident.

We lost no time in selecting from the numerous ravines that were made by the erosion of the friable rock from between the ascending granite ledges, such an one as we believed might be traversed to the top of the ridge without meeting lateral obstructions. Some of our party, mistaken in this, encountered when midway up the side a precipitous wall of granite, which made their return imperative. Five only of the company, after clambering over a snow-slide a thousand feet or more in width, reached the depression upon the right of the Grand Teton which we called "The Saddle." The ascent thus far had tested the endurance of all who made it. It was only difficult or dangerous to those who had selected the wrong passage through the ledges. We ate part of our luncheon while upon "The Saddle," which we reached about noon, and rested there a quarter of an hour beneath the shadow of the Great Teton. It seemed, as we looked up its erect sides, to challenge us to attempt its ascent. As we gazed upon the glaciers, the concavities, the precipices which now in more formidable aspect than ever presented themselves to us, we were almost ready to admit that the task we had undertaken was impossible to perform. The mountain side, from the Saddle to the summit of the Grand Teton, arose at an angle of sixty degrees; broken by innumerable cavities and precipices.

Our leader, Captain Stevenson, had pushed on ahead, and when Messrs. Hamp, Spencer and the writer had reached "The Saddle," he was far up the mountain, lost to view in its intricacies. Our fears concerning him were allayed by occasionally seeing his footprints in the debris. Very soon after we commenced the ascent, we found ourselves clambering around projecting ledges of perpendicular rocks, inserting our fingers into crevices so far beyond us that we reached them with difficulty, and poising our weight upon shelves not exceeding two inches in width, jutting from the precipitous walls of gorges from fifty to three hundred feet in depth. This toilsome process, which severely tested our nerves, was occasionally interrupted by large banks of snow, which had lodged upon some of the projections or in the concavities of the mountain side,—in passing over the yielding surface of which we obtained tolerable foothold, unless, as was often the case, there was a groundwork of ice beneath. When this occurred, we found the climbing difficult and hazardous. In many places, the water from the melting snow had trickled through it, and congealed the lower surface. This, melting in turn, had worn long openings between the ice and the mountain side, from two to four feet in width, down which we could look two hundred feet or more. Great care was necessary to avoid slipping into these crevices. An occasional spur of rock or ice, connecting the ice-wall with the mountain, was all that held these patches of snow in their places. In Europe they would have been called glaciers. Distrustful as we all were of their permanency, we were taught, before our toil was ended, to wish there had been more of them. As a general thing, they were more easily surmounted than the bare rock precipices, though on one occasion they came near proving fatal to one of our party.

Mr. Hamp, fresh from his home in England, knew little of the properties of snow and ice, and at one of the critical points in our ascent, trusting too much to their support, slipped and fell. For a moment his destruction seemed inevitable, but with admirable dexterity he threw himself astride the icy ridge projecting from the mountain. Impelled by this movement, with one leg dangling in the crevice next the mountain side, and the other sweeping the snow outside the glacier, he slid with fearful rapidity, at an angle of forty-five degrees, for the distance of fifty feet, falling headlong into a huge pile of soft snow, which prevented his descent of a thousand feet or more down the precipitous side of the

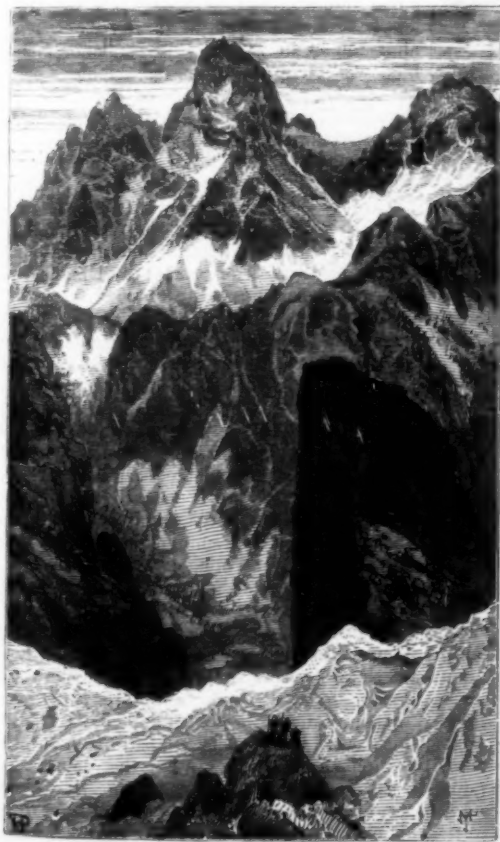
mountain. I saw him fall, and supposed he would be dashed to pieces. A moment afterwards he crawled from the friendly snow-heap and rejoined us unharmed, and we all united in a round of laughter, as thankful as it was hearty. This did not quiet that tremulousness of the nerves, of which extreme and sudden danger is so frequent a cause, and underlying our joy there was still a feeling of terror which we could not shake off. Pressing carefully forward, we attained a recess in the rocks, six hundred feet below the summit, where we halted.

While resting here, far above us, we heard the loud shouts of Captain Stevenson, which we answered. Soon he joined us, with the information that he had been arrested in his ascent, at a point two hundred feet above us, by an intervening rock, just too high for him to scale. It was perpendicular, and sur-

mounted by a wide sheet of ice stretching upward towards the summit, and covered with snow. He had made several ineffectual efforts to reach the overhanging edge of the rock, and at one time lost his foothold, his entire weight coming upon his hands while he hung with his face to the wall. It was impossible without a leap to reach a standing place, and by loosening his hold without one he would drop several hundred feet down the mountain. Fortunately, there was a coating of ice and snow, which reached midway from his feet to his arms, and into this, by repeated kicks with the toe of his boot, he worked an indentation that afforded a poise for one foot. This enabled him to spring on one side to a narrow bench of rock, where he was safe.

We had periled life and limb to little purpose, if the small matter of five hundred feet was to prevent the accomplishment of our task. We determined, therefore, to ascend with Captain Stevenson, and make another effort to scale the rock. When I saw the perilous position from which he had escaped, I could not but regard his preservation as almost miraculous. In spite of nervous exhaustion, Mr. Hamp had persevered in the attempt to climb the mountain, but as all upward progress from this point was extremely hazardous, he and Mr. Spencer were persuaded to avail themselves of a foot-hold in the rocks, while Captain Stevenson and I made a last essay to reach the pinnacle.

A rope which I had brought with me, cast over a slight projection above our heads, enabled me to draw myself up so as to fix my hands in a crevice of the rock, and then, with my feet resting on the shoulders of Captain Stevenson, I easily clambered to the top. Letting the rope down to Captain Stevenson, he grasped it firmly, and by the aid of his staff soon worked his way to my side. The shelving expanse of ice, overlying the rocky surface at an angle of 70° , and fastened to it by slight arms of the same brittle material, now presented an obstacle apparently insurmountable. Beside the danger of incurring a slide which would insure a rapid descent to the base of the mountain, there was the other risk, that the frail fastenings which held the ice-sheet to the rocks might give way while we were crawl-



MOUNT HAYDEN AND MOUNT MORAN—FROM THE WEST.



STEVENSON IN PERIL.

ing over it, and the whole field be carried with us down the terrible precipice. But the top was just before us, not three hundred feet away, and we preferred the risk to an abandonment of the task. Laying hold of the rocky points at the side of the ice-sheet, we broke with our feet in its surface a series of steps, up which we ascended, at an angle deflecting not more than twenty degrees from a vertical line, one hundred and seventy-five feet, to its topmost junction with the rock.

The peril to which this performance exposed us was now fully revealed, and had we seen it at the foot of the ice-sheet, the whole world would not have tempted us to the effort we had made. Why the entire mass of ice, yielding to our exertions, was not detached from its slender fastenings and hurled down the mountain is a mystery. On looking down through the space which separated it from the rock, I could see half a dozen icy tentacles, all of small size, reaching from wall to wall. Seemingly the weight of a bird would have loosened the entire field. We felt, as we planted our feet on the solid mountain, that we had escaped a great peril—and quenching our thirst from one of the numerous little rivulets which trickled down the rock, set resolutely at work to clamber over the fragments and piles of granite which lay between us and the summit. This was more tedious than difficult, but we were amply rewarded when, at three o'clock P.M., after ten hours of the severest labor of my life, we stepped upon the highest point of the Grand Teton. Man measures his triumphs by the toil and exposure incurred in the attainment of them. We felt that we had achieved a victory, and that it was something for ourselves to know—a solitary satisfaction—that we were the first white men who had ever stood upon the spot we then occupied. Others might come after us, but to be the first where a hundred had failed was no braggart boast.

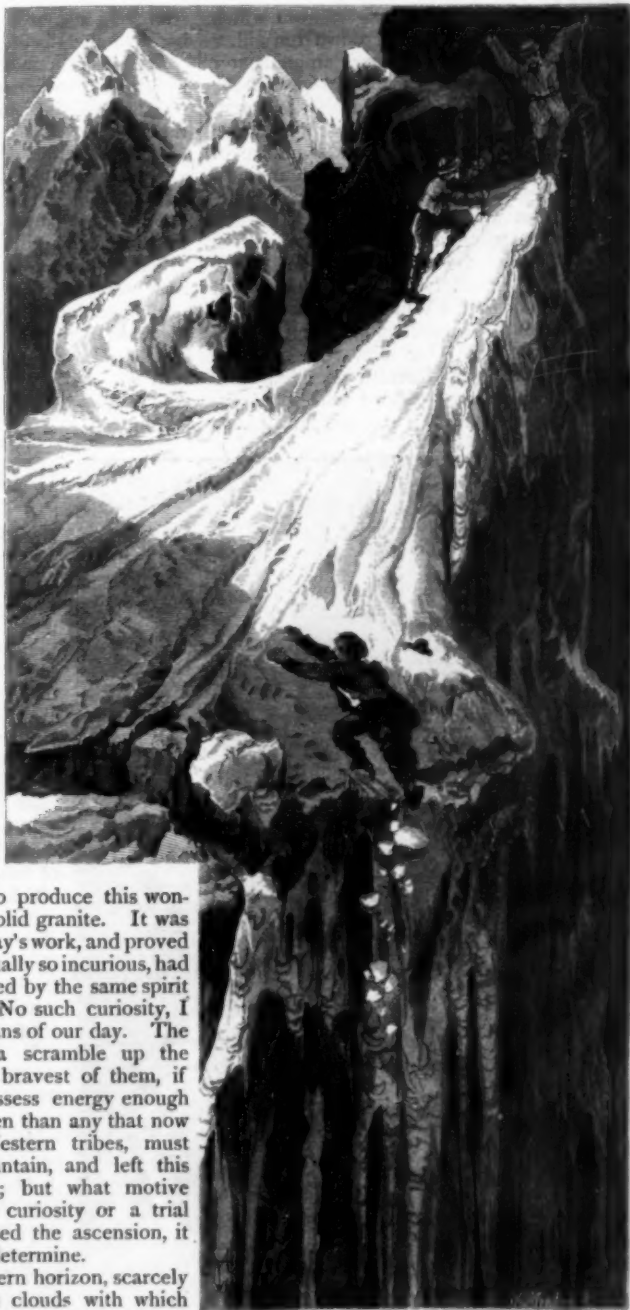
The several pinnacles of the Grand Teton seen from the valley seem of equal height, but the inequality in this respect was very apparent at the top. The main summit, separated by erosions from the surrounding knobs, embraced an irregular area of thirty by forty feet. Exposure to the winds kept it free from snow and ice, and its bald, denuded head was worn smooth by the elemental warfare waged around it. With the unshorn beams of a summer sun shining full upon us, we were obliged to don our overcoats for protection against the cold mountain breeze. Indeed, so light was the atmosphere, that our respiration from its frequency became almost burdensome, and we experienced, in no slight degree, how at such an elevation one could at a single exposure suffer the opposite intensities of heat and cold. Above the ice-belt, over which we had made such a perilous ascent, we saw in the debris the fresh track of that American Ibex, the mountain sheep,—the only animal known to clamber up the sides of our loftiest peaks. Flowers also, of beauteous hue, and delicate

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fragrance, peeped through the snow, wherever a rocky jut had penetrated the icy surface.

On the top of an adjacent pinnacle, but little lower than the one we occupied, we found a circular enclosure, six feet in diameter, composed of granite slabs, set up endwise, about five feet in height. It was evidently intended, by whomsoever built, as a protection against the wind, and we were only too glad to avail ourselves of it while we finished our luncheon. On entering it we found ourselves a foot deep in the detritus, which had been worn by the canker of time from the surrounding walls. The great quantity of this substance bore evidence to the antiquity of the structure. Evidently the work of the Indians, it could not have been constructed less than a century ago, and it is not improbable that its age may reach back for many centuries. A period of time which human experience cannot calculate, was required to produce this wonderful disintegration of solid granite. It was the great wonder of our day's work, and proved that even the Indians, usually so incurious, had some time been influenced by the same spirit which had inspired us. No such curiosity, I imagine, affects the Indians of our day. The toil and exposure of a scramble up the Teton would daunt the bravest of them, if he should happen to possess energy enough to attempt it. Better men than any that now belong to the North-Western tribes, must have ascended this mountain, and left this evidence of their visit; but what motive save that of the merest curiosity or a trial of skill could have caused the ascension, it would be impossible to determine.

Far away on the northern horizon, scarcely distinguishable from the clouds with which they are intermingled, we saw the Belt, Ma-

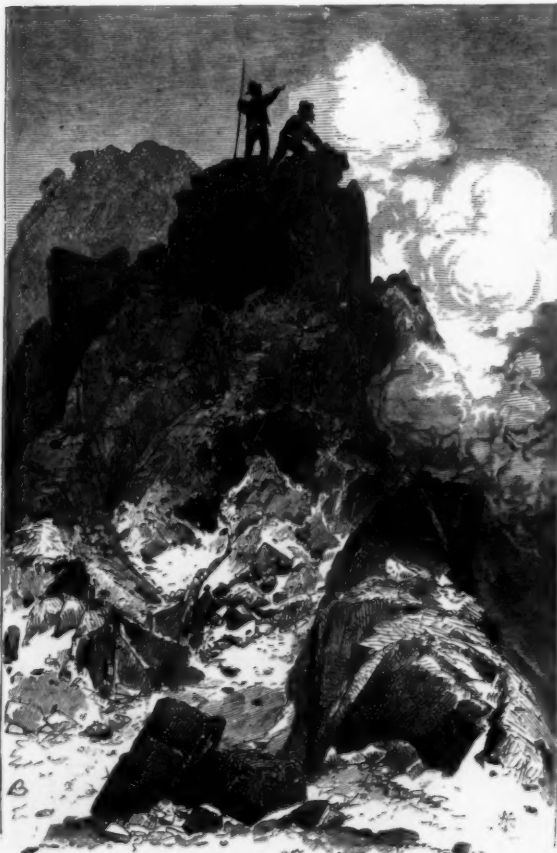


NARROW ESCAPE OF MR. HAMP.

dison and Main Rocky ranges, from which long, lateral spurs stretch down on either side, and close up the immense amphitheater by uniting with the Malade Range on the south. Within this vast enclosure, and more immediately beneath us, we overlooked the valley of the Snake, the emerald surface of Pierre's Hole with its mountain surroundings, the dark defile leading into Jackson's Hole, and Jackson and De Lacy lakes, Madison Lake, the source of the Snake River,—Henry's Lake, the source of the North Fork, and afar off, beyond these, the cloud defined peaks of the Wind River mountains, and the peaks surrounding the great lake of the Yellowstone. Our elevation was so great that the valley beneath us, filled as it was with knobs and cañons and foot-hills, had the appearance of a vast and level plain,

stretching away to, and imperceptibly blending with the distant mountains.

We gazed upon the varied beauties of this wondrous panorama until reminded by the position of the sun that we had scarcely time to effect our descent, and return to camp before dark. Great caution was necessary while passing down the ice belt lest it should become detached, but it was our only passage-way to the bottom, and we were greatly relieved when we reached in safety the cranny occupied by Hamp and Spencer. At this point Captain Stevenson separated from us, and was the first to reach the base of the mountain. We clambered over the rocks and precipices with all possible expedition, and stood in safety upon the saddle, just as the sun was setting.



LOOKING OFF FROM THE SUMMIT OF MOUNT HAYDEN.

The interval between sunset and evening in these high latitudes is very brief, and we had yet to descend the ridge. In our haste to accomplish this we selected a pathway between ledges too abrupt to scale, which led directly to a precipice, thirty-five feet in height, at the base of which was a mass of granite fragments and débris from three to four feet deep. We were now in a dilemma. Either we must pass the declivity or re-ascend the steep mountain side, five hundred feet or more, and select another passage. Crawling to the edge, I saw at a distance of twenty feet a jutting point, which would afford standing room for a single person, and about eight feet below it, a smaller projection, too sharp on the face for a safe foothold. Passing the rope alternately around the bodies of my comrades, I let them down the perpendicular wall to the base, then throwing the middle of the rope over a projecting crag, and seizing the two ends, I lowered myself to the narrow shelf first described, whence a well directed leap enabled me to poise myself on the smaller projection below, and gather for a final jump into the pile of débris, where my comrades stood. Our safe descent

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being thus accomplished, we had yet the snow-fields, ridges, and gorges to traverse, before we arrived in camp. Fatigued with the exercise of ascending and descending the Teton, the passage of these ridges was the most exhaustive effort of our lives. It was after nine o'clock, and very dark, when we first caught sight of our camp-fire, afar down the chasm. After a rough walk over prostrate trunks, through deep depressions, amid pine thickets, climbing boulders, penetrating chapparal, wading streams,—at just thirty minutes past ten, when all our comrades had thought some serious and perhaps fatal accident had befallen us, we entered camp amid cordial greetings and shouts of delight. The joy of a re-union, after even so brief a separation, was as earnest and sincere as if we had been parted a year.

Repeated efforts to ascend the Tetons, all of which terminated in failure, have been made since the attempt of Michaud in 1843. Rope ladders, such as he provided, would have proved of incalculable benefit to us, but as it is not probable that another ascension will be made in our day, we have no advice to give those who are ambitious of the distinction. Often, while clinging to some little rock or crevice, as the only chance to escape a tumble down the precipice, we wished ourselves safe on terra firma, and promised ourselves never to engage in another enterprise of equal risk. At other times we were exposed to falling rocks and ice, really one of the greatest dangers where the ascending company is scattered along the mountain side. There were sections of the mountain, which, seen from below, were apparently smooth and easy of ascent, but on reaching them we found them filled with rugged inequalities of rock, seamed with snow, and dotted with ice patches. The falling of rocks, crackling of crags, and breaking of ice, constantly reminded us that the great mountain itself was undergoing a process of disintegration which, in the distant future, would crumble it to a level with the valley it overlooks. Often were we admonished of the necessity of constant watchfulness, lest some misstep or some decaying rock, to which we had trusted, should give way and carry us down the precipice. The draft upon our ingenuity, in devising means to clamber up steep rocks and over snow-fields was incessant; as was proved, when near the top, in the effort to surmount the precipice that but for our rope would have rendered impossible the completion of our task.

No steeper ascents than those made by us,



COMING DOWN THE MOUNTAIN.

have ever distinguished the Alpine climbers; and when Whymper states that the ascension of one mile in two miles of latitude is "prodigiously steep," we may be forgiven a little pride in the accomplishment of a mile of ascent in somewhat less than *one* mile of latitude! The resemblance of the grand Teton to the Matterhorn is very remarkable. Of the two the Teton, though not so high, is more abrupt, and probably presents many points in the ascent more difficult to scale, than those of the Matterhorn. The actual height of the Teton is 13,762 feet. This great height, its peculiar isolation, and the rarefied atmosphere through which it is seen, makes it visible a very great distance.

While ascending it, we saw in the snow-patches large numbers of grasshoppers, stiff with frost, and to all appearance dead, but at mid-day, when the sun came out, warmed by its beams, they exhibited in their movements all the life peculiar to that lively insect. Mosquitoes attacked us even on the very summit. Mr. Adams, who had visited the Alps, pronounced the scenery of the Tétons equal in beauty and picturesqueness. Their geological formation is granite, seamed with trap across the sections. At several places, during the ascent, out-croppings of the "Quebec group" were noticed.

Our return to the main camp the next morning attested by its noise and hilarity to the gayety and good-humor our success had inspired. We woke the echoes of the cañon with songs and shouts, and entered camp amid the rejoicings of those we had left in charge, who greeted us as cordially as if we had returned from a long journey.

Beaver Dick and Shep Medary, who improved the time we had spent in visiting the Tétons by exploring a route for our train over the main range, returned into camp, with the report, that by following up Middle River, we could pass over a divide, at the head of that stream, of light grade and obstructed only by falling timbers, into the basin of the Fire Hole River. In some places the trunks in falling had piled up to the height of seven or eight feet, but by cutting them away, our road would be better and much shorter than by any other route.

While exploring this route, through a patch of pines, Dick came suddenly upon a monstrous grizzly, that had evidently been watching him for some time. He was seated on his haunches, eying Dick, with a very unamiable expression of countenance, and waiting for him to come up and engage in fight. The situation was not a pleasant one,

and presented as the only chance for escape, the speedy death of his bearship. A shot which would wound without killing, would be as fatal as to attempt escape by flight,—and all experience in shooting this animal bore testimony, that nine efforts to kill failed for every one that was successful. Dick brought his rifle to his shoulder, and Bruin, as if aware that the fight was about to commence, uttered a premonitory growl. Dick fired. Fortunately his aim was deadly. The ball entered the front of the neck, and passed directly through the spinal column. The huge animal fell forward with a terrific howl, that carried his life with it. Dick was safe. A shot that had not reached the spine or heart would have been unsuccessful. Bullets fail to penetrate the head of the grizzly or the buffalo. Shep was fortunate in killing a black bear with which he had a like encounter. The two hunters came into camp laden with antelopes, and an abundance of waterfowl. In the evening I accompanied Dick on a visit to his beaver traps. We found in one of them the fore-foot of a beaver, which the animal, to effect his escape, had actually twisted and knawed off. Dick said this was a very frequent occurrence. The beaver, in his opinion, possessed reasoning powers and sagacity far superior to that of any other animal.

On the following morning we broke camp at an early hour, and were persuaded five miles out of our way, and over a rough and hilly route, in order to have peace in the family and gratify the whim of an uncomfortable comrade who, against the opinion of Beaver Dick, insisted that we should thus "cut off" greatly in the distance, and find a smoother trail.

By way of contrast to the route which had caused such general disgust, we were conducted the next day by Beaver Dick over a route which he had explored on his return from Middle River. It lay over a fine rolling prairie, dotted with aspen groves and luxuriant patches of grass opening into one another, for nearly the whole distance. Crossing Conant's Creek some miles above our old ford, we passed along the margin of several crystal streams, that flowed down from the mountains, for a distance of fourteen miles, through one of the finest pastoral countries in the world, making our camp on the bank of Middle River.

The water in the stream grew warmer as we approached the mountains, indicating our proximity to hot springs and our entrance within the banks of that river of heat, traced

through the territory of Montana by Captain John Mullin, as long ago as 1856. In a little volume put forth by him, a few years ago, he fully defined the width, course and banks of this stream of caloric vapor, and without attempting fully to account for its presence, intimated that it might be produced by hot springs which, at that time, were reputed to abound on the upper wafers of the Yellowstone. The whole theory, when published, was rejected as absurd, but since the discovery of the geysers and hot springs, it is worthy the closest scientific investigation. It is not improbable that the intense heat projected into the atmosphere, from these causes, may perform an important part in the production of those singular modifications common to this newly settled region. If the fact could be established, it would account for a class of phenomena, in the climate and products of the country, which has never been satisfactorily explained.

At Conant's Creek, Mrs. Dick and her children bade us farewell. She had won the respect of every member of our company, for the care she manifested for her children, and her attachment to her liege lord.

Our course was through aspen groves, and over prostrate trunks, up the valley of Henry's Fork. The impediments offered by the timber were very trying to the patience of both donkeys and men,—as evinced by the stubbornness of the former, and the profanity of the latter. We came to a creek so full of beaver dams, that no running water was perceptible in it,—the back-water reaching from one dam to another successively for a great distance. Those of our company who had never seen such works before, were surprised at the size and length of the trees which had been felled by the beavers to aid in their construction, many being six and eight inches in diameter. It is no uncommon thing to see, along the borders of the beautiful cottonwood groves of the lower Yellowstone, trees of two feet in thickness, lying in the river, which had been prostrated by beavers in a single night. The industry and mechanical ability of this little animal surpass belief. Groves of immense cottonwoods jut out on the points of the Yellowstone, presenting on all sides exposed to the water a regularity as perfect as if trimmed to a plumb-line. In passing down the river one can scarcely resist the constant impression that the country has been settled and cultivated for thousands of years, and that within these picturesque groves, castles of feudal days are still standing. Our train

crossed the creek on one of these dams, which we prepared by laying down a few poles over the center and filling in with willows. Several mules were crowded off the dam and became mired in the basin.

While ascending a long hill, which lay beyond the camp, several of our mules cast their packs, and one of them, during the process, turned five backward somersaults down the hill. The performance would have been fatal to any other animal than a mule, but this little fellow picked himself up, shook his head, pricked up his ears, and with hurried pace rejoined his mates, as unconcerned as if nothing had happened. The relative toughness and powers of endurance of the horse and mule, as determined by mountain travel and exposure, are so much in favor of the latter, that very few horses are used for packing except by the Indians. The mule will go without food and drink, and perform customary labor, where the like deprivation would entirely unfit a horse for service.

Our route now lay over a high volcanic ridge, covered with lava, which bore on its blackened surface testimony to the great heat which, ages ago, had produced it. Nothing gives a country a more desolate appearance, than burnt lava and basaltic ridges and tables. A large lake which we passed, evidently the crater of an exhausted volcano, taking its hue from the somber rocks which composed its basin, suggested the idea to one of our poetic comrades, that it might be a vent to the infernal pit. It was a relief as we pushed through this gloomy region, to catch occasional glimpses of verdant hill-sides and valleys, on either side of us. Some of our company amused themselves with firing at the swans, as we passed the lake, but without success.

Sawtelle's Ranch, which we visited, is beautifully located upon the border of Henry's lake, near the point where the North Fork of Snake River, Red Rock creek and the Madison River take their rise. The lake is about five miles long by four broad, and abounds in the large salmon-trout of the Pacific streams. These delicious fish are speared in great quantities by Messrs. Sawtelle and Wurts and sold in Virginia City and Helena. The method of capturing them is like the old-fashioned way of spearing eels in the States by torch light. Large mountain ranges are seen in every direction from the lake, but its immediate margin is low and marshy, stretching away to meadows and foot-hills covered with bunch grass. It is forty miles from Sawtelle's to the first settlements in the

Madison Valley. To this remote but beautiful nook, Gilman Sawtelle first came in 1866 and established his abode. He has dwelt there ever since, dividing his time between fishing, hunting, and raising a herd of cattle upon the fine pasture-land of the valley. Sawtelle is a man of mark. He exhibits in his life and conduct, the signs of careful early training, and carries beneath a rough exterior the manners and feelings of a gentleman. There is none of the roughness of border life in his nature, though, if aroused, we can fancy he would be equal to any emergency. He has been so long exposed to all the dangers of Indian attacks, that he has ceased to regard them as possible, and when spoken to about them always dismisses the subject with the remark that he is in no danger. He has built a spacious log dwelling and three or four outhouses, which give to his home an appearance of thrift and comfort. Once a week during the summer and fall months, he is in the habit of visiting Virginia with a load of trout, which are greatly in demand.

A few days previous to our arrival at Sawtelle's the sheriff of a neighboring county, with a posse, had arrested two horse-thieves near his ranch, who had been committing depredations upon the ranches of the lower Madison Valley. Three of the band, which had been traced to this vicinity, were killed in an encounter with the sheriff and his party, and their bodies were left near the head of Red Rock creek; the other two, finding themselves outnumbered, saved their lives by surrender. They informed their captors that there was another band, which intended to follow Dr. Hayden's party up the Yellowstone, for the purpose of stealing his horses and pack animals, and then cross over to Snake River, intercept our party and serve it in the same manner. The sheriff recovered eighteen horses and mules from the rascals, which he restored to their owners, in the Gallatin and Madison valleys.

Perhaps in the entire Rocky Mountain range there is no more wonderful freak of nature than is to be met with here. At each cardinal point, seen from the lake, the mountains present a broken appearance and, upon examination, we found at each of the breaks, upon the north, east, and west, passes through the main range, and upon the south through a lateral spur, which could be crossed with teams at all seasons of the year. These passes are all within a few miles of each other. The Targee or East pass, is about 6,300 feet elevation, and opens into the valley of the

Madison. Henry's or South Pass, through which the North Fork flows, is 6,000 feet elevation, forming a gateway into the valley of the Snake. Red Rock or West Pass, at an elevation of 6,300 feet, connects with the great valley of the Jefferson, while the Madison pass of the same height opens into the valley of the Madison. Either of these passes may be readily improved by a railroad, and the north and east passes are more in a direct line of travel from the Central Railroad to Montana, than the road that is now traveled. There is nothing to prevent the construction, from Taylor's Crossing of Snake River to these passes, of a good road that would shorten the route fifty miles in distance, be less mountainous and sandy, and pass through a more desirable country than the present road.

We spent the next day in an exploration of the mountains. On the south side of the lake, and at no great distance from it, we ascended a lofty peak, which proved to be an extinct volcano. It was nearly 11,000 feet above the ocean. A crater yawned beneath us, oval-shaped, one mile and a-half in length by three-quarters of a mile in width and twelve hundred feet in depth, composed of blackened basalt and porphyry, completely lined with stunted pines and bunch-grass, and forming altogether a horrible-looking pit. It was so abrupt in descent, that we could not, without great difficulty, explore it.

Our larder being destitute of sugar, yeast-powders, and various other necessities, Mr. Adams and Shep Medary, with five pack animals, left our camp at Henry's Lake, for Virginia City, to obtain supplies, with instructions to rejoin the company at the Fire Hole Basin, with all convenient expedition. In the stream near our camp, we found many specimens of agglutinated pebbles, which were held together in the form of cells by some tenacious substance, the product of a small aquatic animal. They were unlike anything we had ever before seen. The cells did not exceed an inch in length, and the gravel of which they were composed was very small, and its particles nearly equal in size.

Messrs. Jackson and Campbell, photographers, Coulter and Beveridge, botanists, Dr. Reagles, Spencer, Sibley and the writer were designated to leave for the Fire Hole Basin the next morning, as an advanced party.

After a weary march, two of the incidents of which were the tumbling of our mules ninety feet down-hill, fortunately however without damage to the photographic apparatus with which they were laden, and the breaking of

the neck of Spencer's horse,—we at last reached the Fire Hole Basin. In the hurry to get home, our company in 1870 made no stay in this basin, and since that time it has been visited and explored by several parties. As the vestibule to the wonders of the National Park which lie beyond, it is worthy something more than a passing notice. There is nothing striking in its general appearance, to distinguish it from any little nook in the mountains. It is very irregular in form, inclosed by steep banks covered with pine shrubbery, and traversed centrally by the Fire Hole river,—a stream of perhaps fifteen yards in width, very rapid, shallow, and broken into rifts by the rocks and boulders scattered along its channel. The valley itself presents a strangely mottled appearance. Spots of verdure, clumps of pines, and patches of white sinter thrown from the springs, are visible in every part of it. It is perhaps three miles long by one and a half miles wide. Constant wreaths and jets of steam are ascending from the hundreds of springs and orifices which fill it, as if the powers of a thousand manufactories were at work beneath its surface. Occasionally a jet of water is projected from some orifice to the height of fifty or sixty feet, which, but for the immense jets of the Upper Basin, would pass for a very respectable geyser. To a person who has not visited the Upper Basin, this one would prove a great wonder.

Many of the springs are surrounded by beautiful and delicate silicious walls, and covering their borders with marvelous figures in the most perfect arabesque. Springs of clear, pure water, and of delicately-tinted stucco were side by side. A remarkable feature never seen in the other localities, characterized some of the mud springs. Instead of boiling and emitting puffs, the whole surface of the water alternately rose and fell in a body, like the swelling and settling of a wave at sea. The effect was very singular. We found the Mud Puff, described by Dr. Hayden, an immense cauldron of boiling paint, of a pink hue, the sediment of which is as fine as that of magnesia. Many of the clear funnel-shaped springs were exquisitely ornamented both above and beneath the water, with multiform crystallizations and deposits, as pure as snow. These were very beautiful, not less from the perfect purity and wonderful transparency of their tranquil waters, than from the pleasing effect of sunlight and shade upon their flashing walls, alternately glittering with all the rays of the solar spectrum, and fading into the most deli-

cate gloom. Days could be spent in delightful intercourse with the wonders of this marvelous valley, each one of which exhibited some new feature. A feeling almost of fear is inseparable from the place. The noise of agitated waters beneath the surface, the gush and whiz of some miniature geyser, the constantly ascending cloud of vapor, and the treachery of crust and sod as you pass on them, all seem to whisper of danger; and yet, of themselves they are so curious, that you feel the valley would lose half its charm without them.

While we were passing along from one group of springs to another, forgetful of aught else, we came suddenly upon letters, at least a yard in length, drawn in the scaly crust of silica, which yielded to interpretation the familiar name

BILL HAMILTON,

a name almost as well known among mountain men, as the mountains themselves. Hamilton was an old guide and trapper, whom I first met at Bannack in 1862, and I concluded at once that he had been employed by Hayden. Our anxieties were now awakened to know whether Dr. Hayden had been here and gone. Of course he would not depart without leaving some trace of his visit, and this we immediately sought—and as immediately found, near by, in the same silicious deposit, in the following date:

AUGUST 13TH, 1872.

"This very day!" went up in a shout from our boys. Concluding a hasty circuit of the unvisited springs in the vicinity of our camp, we mounted our horses and pushed forward in pursuit of Hayden's party.

Skirting the hills bordering the north side of the basin, we started from its covert in a small thicket one of those queer birds, known among mountaineers as a fool-hen. It is one of the largest species of mountain grouse, and when molested, instead of flying or hiding, always stands its ground, apparently preferring death to flight. Whether it is the bravery or the folly of the bird that should be charged with this peculiar trait, matters not,—it is called fool-hen for its temerity, and this one, as no one in our party was armed, was finally wounded by a stone thrown by our muleteer, Sibley, who remarked, as he let it fly, "I'm tolerably sure in throwing a rock." The wounded bird skulked around under the pines, and we repeatedly lost sight of it, but

as our only chance for a supper depended upon securing it, we each took part in the search.

"Do you think we shall get it?" inquired Hamp, anxiously, as he turned down the limb of a pine.

"Get it!" responded Spencer, "Get it! We've got to get it, we're out of meat!"

And get it we did, and our shout of rejoicing at the triumph, not only waked the echoes, but summoned to our presence, from a neighboring thicket, our friend Holmes, the artist attached to Dr. Hayden's party, who, it seems, had heard our shouting while in pursuit of a bear, and hurried to join us. He and Mr. Blackmore had separated from Dr. Hayden's company on the Yellowstone, the day previous, and under the direction of Hamilton as guide, were making their way in advance, to the Lower Geyser basin. Mr. Blackmore had been desirous of killing a bear, from the time the party entered the Yellowstone valley, and with that object in view had left the main party, with the hope of finding one on his way to the basin. While in the basin, he and the guide became separated from Holmes, who soon after found, and was in close pursuit of, a large brown or cinnamon bear, at the time he heard the shouts of our company. Hamilton and Mr. Blackmore returned to their camp, on the east fork of the Fire Hole, Hamilton first tracing his name and the date, which we found in the silica. Mr. Holmes left us to return to his camp.

The next day Professor Hayden and his company joined us at ten o'clock. Never were greetings more cordial or heartfelt than those exchanged between the members of the two divisions. It was indeed a holiday, and singular as was the coincidence of our meeting, before the day closed we were to rejoice over greater surprises, for at three o'clock in the afternoon Stevenson came in, with the remainder of our party; soon after Hayden's pack train arrived from Bozeman, and at four o'clock Adams and Shep Medary entered camp from Virginia City, with a load of provisions. We were thus, by circumstances entirely fortuitous, brought together, without any delay, at the place of rendezvous agreed upon eight weeks before, when the two parties separated at Ogden.

It was a grand reunion. On the following day we held a meeting, at which Dr. Hayden alluded to the circumstances under which the two branches of the expedition had reunited, as a coincidence which seemed to be in harmony with all the designs

and purposes they had expected to accomplish. Their work, in effect, was accomplished. They had completed the exploration of a region which in future years would make greater contributions to science, and at the same time afford more delightful recreation to tourists, than any other portion of the globe. The innumerable wonders which filled it, as yet had been seen by scarcely a hundred persons, themselves included. They could tell the world something about it, but as no language could adequately describe it, the world must see it to understand the enthusiasm of those who had visited it. The Doctor then stated that as this basin had been their point of meeting, it would now be their point of separation. This was probably the last time the whole party would be together, and with the hope and belief that the survey had now attained a permanence that would secure it a prominent place among the leading movements of the day, he wished to propose the names of three persons as honorary members who, though not of it, had yet so far participated in it, and contributed to it their aid and assistance, as to have a strong claim to its recognition. The first name he proposed was that of Mr. Thomas Moran, the accomplished artist, who accompanied the expedition in 1871 and had since painted the remarkable picture, now adorning the walls of the Capitol, of the Great Cañon of the Yellowstone,—a painting not less meritorious as a work of art, than as a most accurate delineation of one of the grandest pieces of scenery in the world. He then proposed the name of Mr. William Blackmore, of London, and spoke in complimentary terms of the interest which Mr. B. had manifested in the expedition, of his powers of endurance, and of his intention to furnish some views concerning the future improvements of the Park, founded upon his own experience and familiarity with like public works, and extensive travel in older countries than ours. The last name proposed was my own, a compliment, doubtless attributable to the fact that I was a member of the Washburn exploring party of 1870, whose accounts of this wonderful region first attracted the attention of scientific men.

Dr. Hayden closed his remarks with a graceful allusion to the aid he had received from the members of the expedition, expressing for each and all the warmest sentiments of personal esteem. The motion of the Doctor received the unanimous approval of the company. Mr. Blackmore then followed in a few remarks, and when it became my

turn, I turned the current of compliment against the Doctor,—who with great efficiency as an explorer, unites a maidenly modesty that has carefully avoided every opportunity for notoriety, since he commenced his labors,—by moving that the Grand Teton be hereafter and forever known by the name of Mount Hayden. This motion was carried by an acclamation, which called the Doctor again to his feet in a return of thanks. Another of the three Tetons has been since appropriately named Mount Moran, after the artist just mentioned. At the conclusion of the meeting the company rode to the Upper Geyser basin of the Fire Hole, on entering which they were saluted by an eruption from that most reliable of all the geysers, Old Faithful.

The next morning at four o'clock we witnessed an eruption of the Grand Geyser, which was first seen by Dr. Hayden's party on their visit in 1871. The volume of water thrown from this geyser is about eight feet in diameter. It is very compact, and the eruption is preceded by a subdued rumbling and shaking of the ground in all directions. The column, on this occasion, could not have been less than one hundred and twenty-five feet in height, and seemed to ascend in successive jets, terminating as a single spout that shot up thirty feet or more above the main body. Unlike any of the other geysers, this one tapered in its ascension,

like the different stories in the spire of a church, terminating in an acute cone. It is very properly named, and its performances vary in character, and are frequently on a much grander scale than the one we witnessed. Our party had been very anxious to witness a display of the Giantess. Professor Hayden's company, on their last visit, after waiting five days in the basin, finally left without this grandest of all the geyser exhibitions. Suddenly, and while we were returning to camp,—with a tremendous spasm, which threatened to tear the very earth asunder, it threw an immense column to the height of two hundred feet or more.

Our party could not repress a loud shout, and this, followed by a second eruption of the same geyser, more wonderful, and of longer duration than the first, so frightened our horses, which were feeding near, that three of them, in their struggles, broke the ropes by which they were picketed, ran away, and were secured only with the greatest difficulty.

We spent the early part of the day in revisiting the geysers and springs of this wonderful basin. They had dwelt in my memory since the visit of 1870, like the pictures of a vivid dream—and this survey seemed necessary to confirm me in the faith that they were realities. There was the Castle with its broken parapets of sinter, the Grotto with its yawning cavities and irregular recesses,

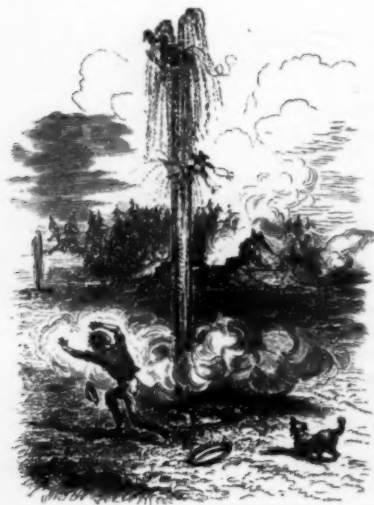


THE UPPER GEYSER BASIN.

the Giant with its symmetrical round tower, the perfect cone of the Bee-hive, the radiating ebullitions of the Fan, and Old Faithful, most reliable of all, sending its sparkling column hourly to the sky.

One evening Messrs. Spencer and Hamp, desirous of testing the cleansing qualities of the hot springs, attempted to wash a flannel overshirt belonging to the former in their boiling waters. After carefully soaping the garment, they committed it to one of the least active cauldrons in the basin, when to their astonishment the water in the spring suddenly receded, carrying the shirt out of sight. Curiosity led them the next morning to revisit the spring, which proved to be a geyser of considerable force; and as they stood in mute astonishment upon the edge, and gazed down its corrugated sides, listening to the gurgling and spluttering of the water and the ominous intonations from beneath, an eruption suddenly took place, which projected the missing shirt, amid a column of water and vapor, to the height of 20 feet into the air, and in its descent it was caught upon one of the numerous silicious projections which surrounded the edge of the crater, and recovered.

During our stay in the basin we had the good fortune to witness, beside the eruptions already mentioned, the Castle, the Bee-hive and the Grotto in action. A hard wind was blowing in the morning, when the Castle, by various throbings, pulsations and shakings gave notice of its intention to discharge.



THE MISSING SHIRT.

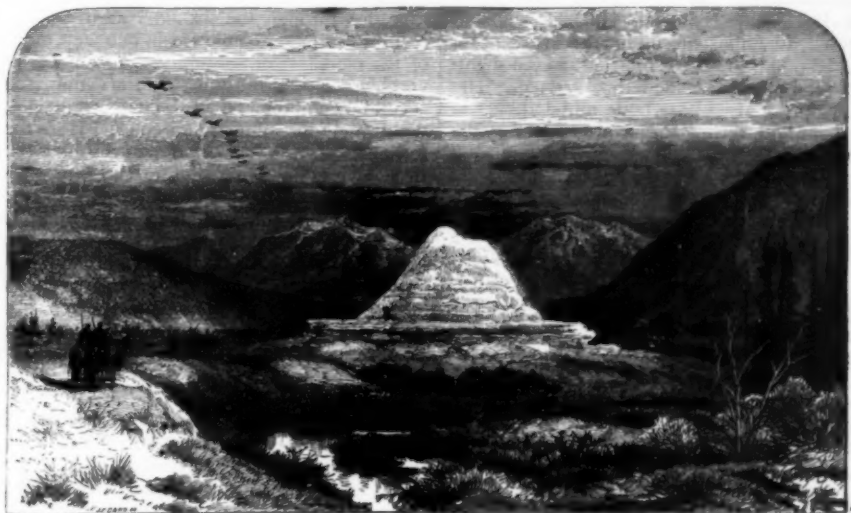
These preliminaries, followed by the issuance of a jet of steam, culminated in the emission of an immense column of water, projected to the height of 95 feet, the spouting continuing for an hour and twenty minutes. The wind had no effect upon the main column, but at the top, where it was lightest, and the curling crest broke into myriads of streams, showers of drops, blown off, fell like immense diamond clusters into the pool. No language can describe the beauty of the scene. Indeed the great variety of effects produced by sunlight, moonlight, storm, wind and rain upon the geysers while in action, must be seen to be comprehended. After the eruption of the Castle ceased, the steam would subside, and then burst forth with a sudden report, resembling the noise of a locomotive when the escaping smoke and steam sound through the smoke-stack.

The Bee-hive treated us to a hasty performance of six minutes, throwing a very compact and regular stream, to the height of two hundred feet, with sufficient force to withstand the wind, which at the time was blowing a gale.

The Grotto followed with one of its eccentric exhibitions. Steam and water were thrown in all directions, and apparently from half-a-dozen orifices. The falling spray, glittering in the sunbeams, looked like the chips of a rainbow suddenly cut to pieces. The flow of this geyser was of more than two hours' duration.

A feeling uppermost with all visitors to these wonders, is that they should be made speedily accessible to the world. Thousands would visit them annually, if they could be assured of safe conduct, even over a wagon-road, and passable hotel accommodation at the different points of interest. No enterprise would yield a surer return than a wagon-road from Snake River Bridge to the geyser basin, and thence through the Park, by way of the falls of the Yellowstone, and the Hot Springs at Gardiner's River to Bozeman. It could be easily constructed, and as soon as the different railroads, now in progress, should penetrate the territory, would be superseded by a branch to this region. How long shall it be until this improvement is made,—until in the two geyser basins, at the Lake, at the falls, at Sulphur Mountain, at Tower Falls, and at the Hot Springs, good hotels shall greet the crowds, that only await their construction, to visit this wonderful region!

I left the Upper Basin, in company with seven others, for the Yellowstone, by the way



EXTINCT GEYSER ON THE EAST FORK OF THE YELLOWSTONE.

of the East Fork of the Fire Hole, which I found to be entirely practicable for railroad improvement. This branch of the river, like the other, exhibits all the energetic features of a mountain torrent. It is broken into frequent cascades. A few miles from the basin, we fell in with two gold prospectors, who camped with us, and gave us much needful information relative to our trip by this new route to the Yellowstone.

We resumed our journey up the Fire Hole, the following day, and when we entered the forest, struck the trail made by Dr. Hayden's party in their trip across from the Yellowstone. This we followed over the divide, and through the timber. On the summit of the range between the Fire Hole and Yellowstone, we found a large number of sulphur springs, and in close proximity several hills emitting sulphurous vapor from innumerable vents. Want of time prevented our examination of these new and interesting features, which are held in reserve for another visit.

In the afternoon we arrived at the Mud Volcano, which on my former visit had seemed to me to be one of the most remarkable curiosities of the Yellowstone. As it had been visited by Dr. Hayden in 1871, I was greatly surprised on reading his articles to find no allusion made to it. But the omission was explained as soon as I saw it in its present exhausted condition. It was no

longer, amid so many greater exhibitions, an object of importance. The crater, which in 1870 was in a state of constant ebullition, the report which resembled the noise of distant artillery, the cone which had been builded by a constant accretion of varied deposits, all had disappeared,—a large excavation remained, and a seething, bubbling mass of mud, with several tree-tops swaying to and fro in the midst, told how terrible and how effectual must have been the explosion which produced such devastation. I could not realize that in this unsightly hole I beheld all that was left of the rarest of those physical wonders which filled this extraordinary region. The explosion must have been terrific, as the forest was torn up in all directions, and the great trees, that then decorated the hill-side, were now completely submerged in the boiling mass that remained.

This change was not the only one in this vicinity. The jet of the mud geyser was thrown with greater force and to a loftier height, and its basin, but partly filled in 1870, now overflowed, whenever an explosion occurred. The sulphur vents are apparently dying out, and most of the volcanic forces in this locality are subsiding.

On our ride to the falls the next day we stopped at the Crater Hill long enough to visit the springs in its vicinity, and gather specimens of the various forms of sulphur. No

material change has taken place there since our last visit. The hill still smokes, and emits livid fumes of sulphur at every pore, and responds in hollow murmurs to the slightest tread upon its treacherous surface. The large spring at its base boils and bubbles in its beautiful setting of scollops, and "the cavern" wakes the echoes with its loud and regular reports. Even the beautiful alum spring has undergone no change, and its saturated margin still conveys a terrible warning to the venturesome observer not to approach too near.

Away we go through "bracken and brush" alongside the tranquil river, intent only upon the grand scene which we know lies directly before us. There is nothing in river or scenery to indicate its existence. Suddenly the voice of the falling water, like the murmur of the distant ocean, breaks upon the ear. Riding forward rapidly, we strike the current far above the upper fall, and follow it down, by the rapids, to the verge. There cannot be a more laughing, merry, jolly cataract than this upper fall of the Yellowstone. It is all joy. Its waters sparkle and foam like champagne, and if there is a jocund feeling or an atom of gayety in the composition of the beholder, it is sure to reach it. He laughs and jokes in response to the splash of the dashing waters. The very rocks which overhang the cataract, the sparkling basin into which it is received, the verdant hill tops, towering above it, all gleaming with sunshine, brilliant with jewels of spray, and glittering with prismatic globules, awaken into full play the liveliest emotions of the most sluggish nature. Our boys forgot to be careful in their desire to be funny, and hazarded some feats that might have had a serious termination. In all this there is a singular fitness, and we fully realized, before we left the cataract, that the visitor who for the first time comes here, should so approach the locality as to make his first visit to the upper fall. It will prepare him for enjoying the grander beauties of the great cataract and wonderful cañon below. There all is shadow. The falls have none of the playfulness and variety of their smaller neighbor. You look down upon them, from the edge of a mighty chasm, and behold them pouring smoothly over the even verge of the precipice, which they approach with the stealth and rapidity of some enormous serpent. The water is black, the shade of surrounding walls somber, and the dreadful gulf into which the river is poured, so dark and so full of spray and foam, that long before the sheet reaches it, you lose its

connection with the attenuated stream that cascades through the dismal cañon below. Nature has never combined in one view more of the elements of sublimity,—nor more favorably disposed for human observation, the several components of grandeur, height, depth, motion, stillness and color. Here the loftiness of the rocks above the falls is brought into immediate contrast with the profound depth of the cañon below them,—the uproar of the waters, with the stillness of the vast gorge into which they are poured,—the gray of the upper rock, with the brilliant coloring of the walls of the marvelous chasm and the green of the adjacent pine-crowned hills. As I rambled around, the old feeling of terror, which I felt so sensibly on my first visit, came over me and grew upon me until we left the locality.

Upon one of the tall spires of rock, which had been formed by the erosion of centuries, an eagle had built her nest where the melody of the falling waters could be heard in security. This nest may have been there for centuries. Lewis and Clark describe one at the Falls of the Missouri, which was always included in the descriptions given them of that cataract by the Indians, and which remains there to this day. It is not improbable either, from the well-known longevity of the eagle, that the same pair of birds still occupy it that were there sixty years ago.

The Grand Cañon, that unique and wonderful piece of scenery, so new and original in its attractions on my last visit, has since been made familiar to thousands by the graphic pencil of Thomas Moran.

We followed the cañon several miles on our route to Tower Falls.

No material alteration has occurred, except the falling of one of the lofty towers of rock, below the mouth of the creek. It was worn off by the waters. Accompanied by Spencer and the two prospectors, I pushed on to a point opposite the mouth of the east fork of the Yellowstone, which we reached by crossing the main stream on a bridge built by Jack Baronet, the mountaineer who rescued Everts in 1870. At a distance of ten miles from the junction, on the east fork, we found some very remarkable petrifications of trees and stumps, still standing on the mountain side eight thousand feet above the ocean. The cortical layers in the wood, were more readily traced, if possible, than when in its natural state, and the inner side of trunks, that had undergone partial decay, were lined with amethystine crystals of great beauty. Many of these trunks measured from fifteen to thirty

inches in diameter. How was the process of solidification carried on in these instances? The trees and stumps are as firmly rooted in the steep hill-side as ever, and the root protrudes from the soil, as in the case of living trees. Yet they are solid stone. If submergence, heat, pressure, and slow deposition of silicious solution constitute the only means of displacement, when and how were these agencies employed in this location?

This portion of the Park, from its lofty elevation, affords some very extensive views of the surrounding ranges of mountains. It will become a favorite resort for future tourists, and when the time comes for such an improvement, a tower erected here will overlook a greater extent of country than any other portion of the Park. We pushed on to the Mammoth Springs the next day. These, the last, are by no means the least of the wonders of the region. Like the geysers, no language can describe them. Dr. Hayden's article, in a former number of this magazine, conveys the most accurate impression of their extent and peculiarities. The form is delineated in the photographs, but these give no idea of the coloring,—which in brilliancy, variety, and arrangement exceed anything we have ever before seen in the physical world. Every conceivable shade of color is to be seen, and all shades, acted upon by the aqueous flow, are continually shifting and changing. The white of the calcareous deposits, which form the scalloped rims of the countless pools

along the hill-side, and the congealed cascades, apparently frozen in their descent, exceeds that of the purest alabaster. New baths are constantly forming, new forms of grace springing into existence, new creations, as beautiful as the fabled birth of Aphrodite, are rising into view on every side. Here is a vast world of efflorescence, exhibiting all the processes of growth, from the smallest spicule to the fully-developed flower. Here are baths of every temperature, ornamented with unsparing profusion, by the wonder-working processes of nature.

Here the powers of decay and re-creation work side by side,—the one upbuilding what the other destroys, with a celerity no less wonderful than the perfect beauty with which its work is done. Nature has no busier workshop, nor one where her labors are performed with greater dispatch. A basket of wire suspended in this magic water for a week, is drawn forth at the end of the period a miracle of beauty, in translucent alabaster. Turn the descending stream upon the fractured or disfigured wall which encloses one of the pools, and in a month it is built up, more beautiful than ever. Pour it over a miniature precipice, and it congeals into a cascade, presenting on its hardened surface all the glories of a living fall. The forms into which this marvelous fluid may be wrought are as countless as the imagination may devise.

A SPIRITUAL SONG. V.

FROM THE GERMAN OF NOVALIS.

WEEP I must—my heart runs over:
Would he once himself discover—
Only once from far away!
Holy sorrow! still prevailing
Is the weeping, is the wailing:
Would I here were turned to clay!

Evermore I see him crying,
Ever praying, ever dying:
Will this heart unending beat?
Will my eyes in death close never?
Weeping all into a river
Were a blessedness too sweet!

Is there none with me lamenting?
 Dies his name in echoes fainting?
 Is the peopled world struck dead?
 Shall I from his eyes, ah! never
 More drink love and life forever?
 Is he now and always dead?

Dead! What means it—sound of dolors?
 Tell me then, I pray, ye scholars—
 What imports the symbol dim.
 He is dumb, and all turn fro me;
 No one on the earth can show me
 Where my heart might look for him.

Earth no more while I am in it
 Can provide one happy minute;
 All is but a dream of woe.
 I too am with him departed:
 Would I lay with him still-hearted
 In the region down below!

Hear, oh, hear, his and my Father!
 Speedily my dead bones gather
 Unto his—oh, soon, I pray!
 Grass will soon his low mound cover
 And the wind will wander over,
 And the form will fade away.

If his love they but perceived,
 Suddenly had all believed,
 Letting all things else go by;
 Lord of love him only owning,
 All with me would fall bemoaning,
 And in bitter weeping die.

BRET HARTE.

SOME ten years ago, Thomas Starr King, then unknowingly near the end of his short but noble and glowing life, was guiding an acquaintance through the dingy, gold-strewn recesses of the Government Mint building in San Francisco. Pausing before entering the Secretary's little office, he said: "Now I want you to meet a young man who will be heard of far and wide some of these days." The visitor went in and was introduced to Francis Bret Harte, then Secretary of the Branch Mint. We all know how the later career of the young writer has more than justified the affectionate prediction of Starr King; for, since that day, Bret Harte's fame has, to borrow the language of his admiring German translator, "extended from the coasts of the Pacific Ocean to the English

coast of the North Sea." "His works have drawn hearts to him wherever the language of Shakespeare, of Milton, and Byron is spoken."

A man who has so many readers must needs inspire a kindly curiosity to know something of the antecedents in a life which has given such generous promise of nobler works to come. Mr. Harte was born at Albany, New York, in 1839. He was christened Francis Bret Harte; but the second name,—an old family one,—was that by which he was familiarly known among home friends and acquaintances. Later in life, the initial of his Christian name was dropped altogether, and the world learned to know and love him by the somewhat crisp title of "Bret Harte."

Young Harte grew up surrounded by re-

fining influences; his father was a teacher of girls, and a ripe and cultured student withal. Left fatherless, Harte wandered off to California in 1854, dazzled with the golden visions which then transfigured that distant land; and, won by the fantastic romance which stories of the early Spanish occupation, sudden wealth, surprising adventure, and novel life and scenery invested the country, he cast himself into the changeful stream of humanity which ebbed and flowed among the young cities by the sea, the pine-clad ridges of the Sierra, and the rude camps of the gold-hunters which were then breaking the stillness of long unsexed solitudes. No age nor condition, no quality of manhood, nor grade of moral or mental culture was unrepresented in that motley tide of migration. The dreamy young student, the future poet of the Argonauts of 1849, drifted on with the rest.

For two or three years he, like all the restless wanderers of those days, pursued a various calling and had no fixed abode. An unsatisfied desire for change, a half-confessed impatience with long tarrying in any spot, seemed to possess every soul. Mining camps and even thrifty towns were depopulated in a single day, the unnoted casualties of their rough life emptying a few places, the rest being eagerly left behind by men who drifted far and wide; their lately coveted "claims" were quickly occupied by other rovers from other fields. Harte mined a little, taught school a little, tried his hand at type-setting and frontier journalism, climbed mountains and threaded ravines as the mounted messenger of an express company, or acted as agent for that company in some of the mountain towns which we have learned to know so well as Sandy Bar, Poker Flat, and Wingdam. But all the while the lithe, agile, and alert young artist was absorbing impressions of the picturesque life, scenery, manners, and talk which surrounded him as an atmosphere.

In 1857, or thereabouts, he drifted back to San Francisco—"The Bay," as the pleasant city by the sea was fondly called by the wandering sons of adventure. The Bay was the little heaven where were cool sea-winds, good cheer, and glimpses of that sensuous life which was then thought of as a far-off, faintly-remembered good found only in "the States." Here Harte speedily developed into a clever young *littérateur*. Working in the composing-room of a weekly literary journal, he put into type some of his own graceful little sketches by way of experiment. These were noticed and appreciated by the editor, and he was translated from "the case" to the edi-

torial room of *The Golden Era*, where some of the pleasant papers which find place in his later published works were written. These were chiefly local sketches, like "A Boy's Dog," "Sidewalkings" and "From a Balcony." Meantime, marriage and the cares of a growing household had changed the vagrant fancy of the young writer, and he roved no more. He wrote a great deal which has not been gathered up, and in the columns of daily papers, as well as in *The Californian*, a literary weekly which he some time edited, appeared innumerable papers which enriched the current literature of those times, and swelled the volume of that higher quality of California journalism which seems now to have passed quite away.

In 1864 he was appointed Secretary of the United States Branch Mint in San Francisco, a position which, during the six years he held it, gave him time and opportunity for more careful work than any which he had heretofore accomplished. During this time some of the most famous of his poems and sketches were written. "John Burns of Gettysburg," "The Pliocene Skull," "The Society upon the Stanislaw," "How are you, Sanitary?" and other little unique gems of verse were written about this time and first appeared (for the most part) anonymously in the San Francisco newspapers. In July, 1868, the publication of *The Overland Monthly* was begun, with Bret Harte as its organizer and editor. The success of the magazine was immediate and decided. We cannot tell how much of its renown was owing to the series of remarkable stories which immediately began to flow from the pen of its accomplished editor, nor how much to the rare talent which he seems to have had in awaking the dormant energies of those who constituted his loyal staff of contributors. *The Overland* became at once a unique, piquant and highly-desired element in the current literature of the Republic; and it found a multitude of readers on both sides of the Atlantic. In its pages, August, 1868, appeared "The Luck of Roaring Camp," a story which, whatever may be the merits of those which have succeeded it, gave Harte the first of his great fame as a prose-writer. But it was not until January of the next year that the stimulated appetite of the impatient public was appeased by the production of "The Outcasts of Poker Flat," a dramatic tale which probably contains more firmly-drawn and distinct characters than have appeared in any one of Harte's stories or sketches. "Miggles" came next, and, mar-

shaded in their long array, the inimitable personages who figure in still later stories emerged from their shadowy realm and passed into the language and familiar acquaintance of the English-speaking world. Col. Starbottle, John Oakhurst, Stumpy, Tennessee's Partner and Miggles—with laughter and with tears we remember them all; we shall know them as long as we know Sam Weller, Micawber, Little Nell and the goodly company called into being by that other magician who has, at last, laid down his wand forever.

fore. Harte's first book was the *Condensed Novels*, a collection of wonderful imitations, too real to be called parodies, first printed in *The Californian*, published in a poorly executed volume in New York, called in and republished and reinforced in 1871. Four new volumes have issued from the pen of the poet-storyteller, and a great constituency hungrily waits for more.

In the Spring of 1871, Harte, resigning the editorial position which he held, as well as the Professorship of Recent Literature



BRET HARTE.

Harte's poems are more thickly scattered through his later work in California than elsewhere. Some of the best-known were written between 1865 and 1870; "Plain Language from Truthful James," popularly quoted as the "Heathen Chinee," appeared in *The Overland* of September, 1870. A more ambitious work, "The Lost Galleon," was an earlier production, and gave title to a thin volume of fugitive bits of verse published in San Francisco a year or two be-

fore. Harte's first book was the *Condensed Novels*, a collection of wonderful imitations, too real to be called parodies, first printed in *The Californian*, published in a poorly executed volume in New York, called in and republished and reinforced in 1871. Four new volumes have issued from the pen of the poet-storyteller, and a great constituency hungrily waits for more.

In the Spring of 1871, Harte, resigning the editorial position which he held, as well as the Professorship of Recent Literature

in the University of California, to which he had lately been called, returned to his native State with the ripened powers and generous fame which he had gathered during his seventeen years of absence. When his life shall have been adjusted to the new conditions which meet here any long-absent wanderer, we shall, no doubt, see the somewhat wavering panorama of his genius move on more steadily, glowing with more vivid colors and crowded with more life-like shapes than any

which his magical touch has yet placed on canvas.

What Harte's repute and standing are in his own land need not now be told. Few writers of modern times have been more discussed; it were better if his critics had always been generous as well as just. But it would not be fair to close this little sketch without noting the fact that most of his works have found eager readers in other lands. English editions of his stories are popular and widely circulated. In Germany, the genial old poet, Ferdinand Freiligrath, has translated a volume of Harte's prose tales, to which is prefixed a charming preface by the translator. We cannot forbear making this extract, so full of the simple-hearted Freiligrath's goodness:—

"Nevertheless he remains what he is—the Californian and the gold-digger. But the gold for which he has dug, and which he found, is not the gold in the bed of rivers,—not the gold in the veins of mountains; it is the gold of love, of goodness, of fidelity, of humanity, which even in rude and wild hearts,—even under the rubbish of vices and sins,—remains forever uneradicated from the

human heart. That he there searched for this gold,—that he found it there and triumphantly exhibited it to the world,—that is his greatness and his merit. That it is which drew hearts to him wherever the language of Shakespeare, of Milton and Byron is spoken. And that it is which has made me, the old German poet, the translator of the young American colleague; and which has led me to-day to reach to him warmly and cordially my hand across the sea. Good luck, Bret Harte! Good luck, my gold-digger!"

Th. Dentzon has charmingly introduced some of Harte's California sketches to the French world of readers, and, in an article in the *Revue des Deux Mondes*, he has given at great length a critical analysis of the powers and genius of our favorite story-teller. Our French and German friends alike wrestle with the difficulties of the untranslatable; but, *malgré* their failure to master the dialect of the gold-digger, they reproduce admirably the delicate finish and felicitous manipulation of the author. Thus his genius has found expression in many languages, and the gentle, loving spirit which animates his works lives and walks in other lands beyond the sea.

CAPTAIN LUCE'S ENEMY.

THE great army moved down upon the river and encamped above the enemy's stronghold. There was dredging and digging and hard, patient weeks of approach to be spent before the plan of attack could be fairly tried. The country waited in impatience, and the army toiled and watched, and each individual soldier and citizen lived meanwhile the separate and private life of thought and feeling, of which the visible existence is but the mask or expression more or less dimly comprehended. It is of this underlying and more real life of two or three out of the millions of actors in that tremendous drama that I am going to tell the story now.

A carriage with two ladies and a very old negro driver came to headquarters of one of the brigades one day about noon, and the general for whom they inquired came out courteously to hear what they would have. The elderly lady introduced herself and her daughter, explained that their house and lands adjoined his lines, and that the men of the neighborhood being all in the southern armies, they were naturally exposed to an-

noyance and uneasiness, and she asked to have a guard for the protection of themselves and their property. The general promised to see to the matter, made a note of the name and place: "Mrs. Forest, of Cottonwood Plantation," two or three miles to the southwest. In consequence of that interview, Captain Luce of the "Fessenden Riflemen" was presently detailed to post a guard at the Forests' place, and rode over in person the first day. Luce was a good soldier, a rather sober fellow, somewhat reserved and sharp with men, and a little shy among ladies; not handsome, but of a good presence, and very much liked by his men. The two ladies were true Southerners, but of the better class. They were proud of their State and the Confederacy, and scornful of the North; but that aside, they were well-bred, tolerably informed, superior in manners and bearing. It was no easy matter, that first interview of the young officer with his fair enemies. But he determined to have an understanding with them, if possible, and know just where he stood in the place. So after the first awk-

ward difficulty of introducing himself, and the reserved and distant response which was not unnatural from the lonely ladies towards a strange man and an enemy whom circumstances forced them to receive, he said :

"My men have strict instructions as to their duty, and I wish you to report immediately any disrespect or annoyance which they may show or permit. I will come or send as often as I can to see about it, and shall do my best to make your home secure and pleasant. But I must ask you to remember that we are soldiers in an enemy's country, and exposed on your account. The men must not be annoyed or harshly treated. You will easily see that they must regard an insult to them as aimed at the cause they represent by its enemies, and one that they are bound in honor to resent. I say this for your own sakes, wishing to save you trouble in the future. I do not respect you the less for taking sides with your State, and do not wonder that you do not love us for fighting your friends and desolating your country. But you must remember that there are two sides to the question ; that your friends would be at my home if they could ; and I hope that some of them would see that my mother and sister came to no harm. I believe that they would."

Beginning thus squarely, and continuing to show the same simple, downright, but courteous bearing in his visits, the first constraint and somewhat haughty politeness of the ladies melted imperceptibly into a respectful familiarity and confidence.

The younger lady's name was Ellen. She was rather tall, with an almost martial carriage, so straight, and proud, and straightforward, disdaining little arts and graces, turning neither to the right nor left. She did not belie the intelligence that lighted up her fine face ; she was unusually well read in books of the lighter kind. That alone would have kindled a friendly feeling in the captain, who was something of a student ; and from the first he was piqued by her self-contained manner, and admired her simple dignity and the quickness and keenness shown in what she said. With the growing confidence which constant intercourse with the young soldier inspired, her reserve wore off, and they became good friends, in a way. But the frank kindness that took the place of the young lady's first manner, had the same qualities of self-reliance and courage behind it, and Luce felt very sensibly that he held his friendly footing upon sufferance and straight walking, and that one step aside would precipitate him

from it ; and the further he went in that path the less did he care to fall out of it.

Luce presently found himself contriving to be at Cottonwood a great many times in a week, and his mind going back there more and more as he went about his duty. He had a small number of favorite books with him in camp, and some of them presently found their way to the Forest mansion, and some with the name of that family on the fly-leaves took their place in the officers' tent of company C. Luce began to have a great liking for talking over Thackeray with Miss Ellen. She shared the incomprehensible dislike of her sex for that author, and she and the captain had many a talk, good-humored but sincere, and sometimes serious, over the master's men and women. But when Luce went over these discussions in his mind, it was not so much of the weight of the argument that he found himself thinking as of the lady's keen instinct, her quickness and delicacy of perception, and her shrinking from falsehood and impurity and difficulty in believing them.

But digging and dredging could not last forever, and one day Captain Luce woke up and found that the army was beginning to move again. His division was yet undisturbed, but he knew the marching orders would come before long, and the thought brought him a dull new feeling not at all pleasant.

He did not find the ache grow less by sleeping on it, and indeed he was late falling asleep and awoke very early. He made an errand to ride over to Cottonwood in the morning, found Miss Ellen alone, and told her of his near departure.

"When we went into camp over here," he said, "I was fretted by the delay, and now we are going, I feel as if I were leaving home." He laughed a little, rather ruefully.

She was doing some needlework, and she laid it down, and looked over at him thoughtfully. "So you're going away to fight my friends," she said. "Doesn't it seem strange that you and I, sitting here, should be enemies?"

"It seems crazy," he answered. He was leaning against the open window. He drew his sword and let the sun glitter on the polished blade. It was a pretty thing and made for a pretty use, he thought. This business he was in took for the moment that look of grotesque and incredible madness and folly that it does now and then, I suppose, to us all. The lady was sitting with a serious face and her eyes cast down, seeming to debate some-

thing in her mind. When she looked up he was sliding the bright blade back in the scabbard.

"Captain Luce," she said, "you have been very kind. I am going to ask one more favor of you."

"I will do anything for you consistent with my duty," he said.

She bade him wait, and went out and came back with an ordinary card photograph, which she put into his hand. It was the picture of a handsome young fellow in the uniform of a Southern cavalry soldier.

"Is it your brother?" Luce asked, glancing at the finer living face before him. "He looks a little like you."

"No, he is a friend," she said, blushing very slightly. "His name is Morris—William Morris. He was a captain in the twenty-sixth Tennessee regiment when I last heard of him."

Luce looked at her while she was speaking, and then turned away and looked out at the bright land and sky, and it was as if a black cloud had drawn suddenly over both. He put the card back to her without looking, and said, rather coldly:

"Well, what do you want me to do?"

"Will you be back here again?"

"I suppose I can come once more if there is any need," he answered. "Do you care?"

"Certainly. I shall be very sorry when you go. It's a dark time for us, you know, and you have been very friendly. I shall miss you sadly."

"Thank you. You're very good."

"You will come to-morrow, then. Keep the picture till you come. I want you to familiarize yourself with it, so you will know Captain Morris if you should meet. You are my friend too now, and don't you see how terrible it would be if you should meet and hurt one another?" and she shuddered and turned her pained face aside. He took a step or two away and sat down by the table, and she came and sat down opposite. He held out the card with the face down, and answered sternly:

"He is the enemy of my country. I am a soldier. I must do my duty."

"I do not ask you to do otherwise," she replied, a little proudly. "If you should fall into the hands of our soldiers, and should meet Captain Morris, if you will give him my name I am certain he will do you any kindness in his power. Is it too much to ask you to do the same by him? Will you keep the picture till to-morrow?"

"If you wish it," he answered, and drew

back the card and took a long look at the brave, frank face and manly figure of the trooper.

It was late in the afternoon of the following day when the captain came galloping up the Cottonwood avenue, and sent off the guard. His black horse was white with foam. Miss Ellen met him at the door, and he took a last look at the picture as he handed it back to her. And he said:

"I shall know him if he looks like his picture. I haven't a minute to wait. I could hardly get off at all. All the troops are off but ours, and we break camp at day-break. I must bid you good-bye. Is your mother at home?"

Mrs. Forest was quickly called, and they shook hands and said good-bye, expressing their hearty regret and hopes of meeting again. And then the captain mounted and rode off, turning to wave his cap and smile, at the corner, and then, plunging spurs into his mare, went galloping down the rows of trees with a great lump in his throat, and only a dim view of the flying wood and the fields tawny with sunset.

Siege and capitulation, movements by rail and river, hard marching, weary camping, forays, skirmishes, battles, bloody victories and bloody repulses followed one another and removed Luce farther and farther from Cottonwood, and might have easily worn out a light impression. But it seldom needed more than night, or danger, or leisure for thought to bring to his mind's sight a proud, straight girl, with a serious face, as he remembered it best,—and renew the ache and hankering he had brought away with him. He had seen many thousands of the enemy, dead and alive; had, indeed, been sent north in charge of a train of prisoners, but none of his inquiries for Captain Morris met with success. In fact he knew that out of the millions engaged in the enormous contest, it was a thousand to one that they two would ever meet.

One pleasant Monday in May the regiment was ordered to capture a guerilla band that had taken quarters in the mountain hamlet of Steubenville, and it moved out on the South Notch road. Some miles down the valley, Colonel Grierson rode up to the front of company C. "Captain Luce," he commanded, "take your company up this old road to the right. It comes out on the Bloomsbury turnpike, a mile west of Steubenville. They will most likely run that way."

So company C filed off and marched along

the rough old road. Some hours after a messenger met them and ordered them back to camp. Luce was riding at the head of the column. A horseman came round a bend some distance ahead, with the sun on his face. When Luce caught sight of him he bent forward and studied him intently a minute, and then halted his men and rode on alone to meet the stranger. The latter came along slowly and his horse looked tired. He wore the dress of a Union captain of volunteers, and was therefore of the same rank as Luce.

When they were near each other Luce challenged him, and he saluted and answered simply:

"I carry dispatches from General Rosecrans to General Grant. I have been riding since daylight, and my horse is nearly played out. Where is your camp, captain?"

And Luce answered quietly: "You are Captain William Morris, of the Twenty-sixth Tennessee. You are a spy."

A flash of surprise and consternation shot through the stranger's face and his hand sprang to his sword, but stopped with it half drawn. Luce was before him, and the muzzle of his pistol was not three feet from the stranger's head. "Don't draw," he said. "I don't want to hurt you. You are my prisoner."

"You insult me," was the bold reply. "I told you the truth. I will report you to the general. There, do you know that signature? You stop me at your peril." And he drew out and showed Luce a letter to all loyal commanders, instructing them to aid and furnish Captain Browning and help him on his way. But Luce persisted: "I take the risk. You are not Captain Browning. You are a rebel officer of cavalry, and you come from Earlsburgh."

He was plainly startled by that, but answered, doggedly, "There's no use of me telling you anything. You seem to know more about me than I do myself."

"Captain Morris," said Luce, "I don't want to expose you just now. You see I can disarm you and give you in charge. Give me your word that you will not use your arms without warning."

"I promise. I am in your power."

So the two captains rode on at the head of the company. The stranger kept a sullen silence for a while, glancing again and again at Luce's face. By and by he said:

"I'm certain I never saw you before in my life. I'm shot if I see what makes you think you know me."

"I have seen your picture," answered Luce. "I know Miss Forest of Cottonwood."

"Oh, the devil you do!" was the flashing response, and Morris made no further attempt at concealment. "What do you know of her? What do you mean?"

Just then they fell in with the main body coming down a side road, and as they dropped into their places in the regiment, the colonel rode up to Luce and spoke to him.

"They took to the woods, captain, on the east side. But we got Gridley and Haines. Did you meet Westcott? I sent him to look for you. By the way, who have you here?"

Then Morris thought his time had come; but he set his teeth and waited for his exposure with a defiant face. To his utter surprise, Luce answered the colonel:

"This is Captain Morris, whom I met back here. He is carrying dispatches from Gen. Rosecrans to Gen. Grant. I am going to keep him to-night." The colonel saluted and rode on.

"Keep close to my side," Luce said, low and sternly, without looking round. "Don't try to escape unless you want to be hung."

Morris did as he was bidden, and they rode into camp side by side, and one could hardly have told which was the sterner face. Luce gave the horses in charge and led Morris to his quarters.

"Give me all the papers you have about you," he said.

Morris gave him several. "Those are all but private letters, to which you have no right."

"Very well. Promise me you will not try to escape while I let you go free."

"I suppose I must promise. I do."

They went in, and Luce introduced Morris to the officers' mess, as he had to the colonel. Morris said little, and Luce was absent and stern. He went out on some duty, and by and by came and called Morris out. They walked away alone, and Morris faced Luce presently, and demanded:

"Now then, I want you to tell me what you know about Miss Forest."

Luce told him in few words how he had guarded her home the previous spring.

"And she showed you my picture?"

"Yes."

"Oh, by heaven now, I don't understand!" Morris swore fiercely, moving about in excitement. "How did she come to do that? How long were you there? What business had you there, anyway? I swear you're

enough to drive a man mad. I'd shoot you in a minute if I hadn't given my word."

"Oh, come now, don't bluster!" Luce answered, and told him the simple manner in which it came about; and Morris questioned sharply until he knew almost all she had said about him. That quieted him, and he fell to meditating. Luce sat on a fallen tree and thought, in no easy or pleasing humor. Then Morris stood before him and said:

"Well, are you going to report me?"

"You are a spy against my country. I must do my duty."

"You would have done the same if you were ordered," Morris answered.

"And what would you do if you took me?" said Luce.

Morris turned away abruptly. Then he turned back.

"You know nothing about me but information given you in confidence by a lady, and partly out of favor to yourself. Can you use that? Is that your Yankee honor?"

Luce's hand went to his pistol, and he said, "Don't tempt me." But he could not help a feeling of admiration for the young fellow's simple and gallant bearing. That and his perplexity, and a face and voice which their talk called up, affected him with a great gentleness and melancholy.

"Sit down here, Morris," he said. "Isn't it a crooked world? Here are we camping out a thousand miles from home, to kill you, and your fellows camping somewhere to come and kill us. You and I represent the two sides: two young men with like passions and both trying to walk straight, I guess. And here we've come to the blindest piece of road I ever heard of. I can't see any way out of it—I declare I can't." And when we consider how duty and honor seemed for once to have gone to war, was not our brave captain tied up in about as knotty a snarl as ever was tangled?

Morris was somewhat awed by Luce's new mood and manner. They sat still awhile and looked at the dim outlines of the camp below them, and the lights here and there among the tents, but doubtless neither saw much of all that. After a while Luce asked abruptly:

"Are you engaged to Miss Forest?"

Morris started up, but answered, "No."

"You are in love with her?"

"I should think so," he answered, looking up hurriedly and standing up, quivering as he spoke.

And Luce said, "So am I."

Morris said something that I shall not repeat, and stamped on the ground.

"You've no business. I was first, and you had no right to step in when I was away."

"Come now," Luce said, impatiently, "don't let's be children. You know I didn't know anything about you, and I didn't go—I was sent. It's too late for 'ought to have' and 'hadn't.' You and I are in the same boat, and neither of us has much right to find fault with the other. We can't be expected to love one another, I suppose; but I don't want any man's shoes, and if you've got a right to warn me off I want to know it. Has she shown you any special favor?"

The Northerner's freedom and sincerity, and the very evident emotion below his sober manner, moved the other to a passionate frankness.

"No; she's too proud. She cares more for the Confederacy than for all the men in it. I wonder she let you come into the house. She would have gone to fight you Yankees herself if they'd have taken her. She thought me a coward because I didn't run and enlist at the first shout. I couldn't leave her. I was mad with love for her, and I thought I couldn't come away. Then she was angry, and despised me, and I came away in a rage. I sent her my picture in my new uniform, and I never knew she got it till now. That was the one you saw. Did she seem to care about it—or—about me?"

"That's a hard question for me to answer fairly, isn't it? But, honestly, I don't know," Luce replied.

Morris walked up and down, and Luce sat thinking darkly a good while with his head down. Morris stopped before him and asked rather sharply: "Well, what are you going to do with me?" And Luce said, "I'm—if I know."

Luce had to go about some duty, and Morris said the night was fine and he would wait for him outside. Luce came back and found him lying wrapped in his blanket, and he said:

"I don't know what to do. I put it to you. What would you do if you took me so?"

And Morris thought awhile, and answered: "I don't know; it's a tough place. Don't leave it to me."

It was late, and Luce made him come into his tent, and they lay down together; and when Morris was asleep, Luce turned and tossed and tormented himself with doubts and misgivings and happy or heart-sick thrills and memories and fears. He heard the young Southerner moving and muttering in his sleep.

Early in the morning he called Morris out.

"Were these dispatches of importance to your commanders? Were you to take them back?"

"I was to destroy them after they had served my purpose. They are in cipher and could not be read?"

"They are? Have they been long delayed?"

"Not an hour. Browning was captured at Kilgrave Wednesday night, and I took his uniform and came on at daylight."

"And you would not have delivered them?"

"Not if I could help it. And I suppose I could."

Then Luce saw his way. He could make his knowledge serve the cause, and yet not break his faith with Miss Forest. Not that he ever thought of doing that, but it was hard to see how not. He said:

"Promise me you will go straight back where you came from and will give no information against us."

And Morris looked at him, and answered:

"I promise, on a soldier's honor!"

Luce ordered his horse to be brought, and motioned him to mount. He walked by the horse through the camp, and looked at his watch.

"I'll give you half an hour," he said. "Make the best of it. Good-bye," and he offered his hand. Morris took it and held it.

"Give me your address," he said—"at home and here."

Luce told him both, and he repeated them slowly twice. Then he said:

"Captain Luce, you're a straight fellow, and I owe you for this. I shall not forget. Good-bye." He put spurs to his horse, and dashed off. Half an hour later Luce went to the colonel and told him as much of the truth as was necessary, handed him the dispatches, and gave himself in charge, expecting disgrace and punishment. Colonel Grierson naturally found it no light matter to connive at the escape of a spy, and spoke very sharply. Captain Luce went to his quarters and sent his sergeant back with his sword. But the colonel knew Luce's character for courage and honor, and saw the difficulty of his position, and he sent back the sword with word to keep it till it was sent for, and that was the last Luce heard of the matter. The dispatches were duly carried and delivered.

The autumn passed and the winter, with their dreams of fighting and camping. On a Sunday in June there came a letter to

Luce in a strange hand. It was dated at a Union hospital, somewhere in the East, and was this:—

"Captain Luce—I was wounded and captured a month ago. Am paroled, and shall be well enough to travel soon. Am going home. I don't know what to do. Wish to heaven I had never seen you. But that is no fault of yours, and I suppose you wish there was no such fellow as me. You had me in your power and took no advantage, but acted like a brave and honorable gentleman. I must do no less. I have inquired, and hear that your regiment's time is about run out. If so, can't you come home with me, or meet me there? I suppose you didn't leave my people any richer, but such as there is you shall have, and my sister will make you welcome.

"I hope you got into no serious trouble on my account. You ran a great risk unless you destroyed the papers, which I don't suppose you did."

It was signed William Morris. Luce's time had expired. He had no intention of leaving the service, but he made his re-volunteering the means of procuring leave of absence. He went East and found Morris in the hospital; his wound healed, but not strong enough to travel alone. Luce took him in charge, and they started west. They traveled slowly, and Morris gained strength by the way. They were very friendly, and talked frankly together a good deal about the war, with the respect which a soldier feels for an honorable enemy. But neither of them mentioned Miss Forest's name all the way.

The Morris place had been farther away from the army's path than Cottonwood, and had suffered less. Morris's father was blind, and had, of course, remained with his daughter Florence. Both father and daughter received Luce warmly upon Morris's introduction and account of their relations, which, as may be supposed, was not quite full, but made up in warmth to such an extent as made Luce ashamed. Morris felt too much fatigued after his journey to ride far. He asked Luce about the position of his camp when he was there before, and said that was about ten miles north-east, from which Luce inferred that Cottonwood was about eight or ten miles north. But his fatigue did not prevent him from riding with Luce and Miss Florence east, west, and south. Luce was thrown a great deal in the young lady's company, in fact, and found it very pleasant and sprightly company too. After a day or two Morris was much occupied with his

father, arranging their rather disordered affairs, but he made his sister entertain Luce and show him this and that point about the country. A week or two passed so, and neither had spoken of Miss Forest. Luce began to wonder what they were waiting for. One afternoon the two captains rode to a place five or six miles north, on business. They took a different road back, which led to the west at first, and across a high hill. The sun was low, and as they came on the hill-top, a very pretty stretch of sunny lands lay before them. They both paused and looked northward. Far away Luce saw a house and lands that excited a familiar thrill in him. When he turned away Morris was bending forward eagerly scanning the same distant plantation. He turned and met Luce's eyes.

"That is Cottonwood?" said Luce.

"Yes."

And Luce said, "Well?"

"Are you still of the same mind?" Morris asked sharply.

And Luce replied, "Still the same."

"Come on then," he called, and struck spurs to his horse, and dashed down the road to the north.

When Luce overtook him he was waiting for him, and walking his horse up the Cottonwood avenue. Miss Forest was walking before the house as they rode up, and met them with pleasure and astonishment, as may be imagined. She showed great concern for Morris' pallor and the scar of a saber-cut on his face. She made them come in, and tell all about their strange meeting, and Morris' escape afterwards, and his wounding and capture. Very likely she had long ago repented of her impatience and harshness with the young fellow, and she seemed now to want to make amends by her kindness.

Morris forgot all doubts and rivalries in that happiness, and laughed and recounted the incidents to her, praised Luce, and was in high feather. When they came away, however, he grew quickly sober, as Luce was before him. His hot blood rose and surged at the obstacle in his path that he could not see round or through. After his calmer habit, Luce too was excited by the presence of the girl and filled with a mingled pain and delight. Each was occupied with his own thoughts, and they rode for an hour without speaking.

Then Morris turned abruptly and said: "You remember that night when you had me on your hands and didn't know what to do? You put it to me. Now I put this to you: What are we going to do?"

"And do you remember what you said?" Luce answered. "'I don't know. Don't leave it to me.'"

"Oh! that's hard, Luce," retorted Morris. "Don't you see how I'm tied and perplexed?"

"Well, why not leave it to her?" Luce said; "she can't care for more than one of us. I will leave your house and take my chance."

"No, that won't do," he answered; "I couldn't bear it. I should go wild if I knew you were going there, and should want to kill you in a week. You don't know what it is to have this hot southern blood in you. I tell you frankly, I don't love you now. I can't leave it to her. You and I have got to arrange it between us."

So they went in. Morris was absent and lay down after supper, saying he felt tired, but Luce heard him up in his room in the night. Luce sat up late himself, leaning out of the window, and thinking all sorts of things. Naturally his mind ran mostly on the young lady they had been to see, and he found himself going over her words, looks, tones, and actions, and found pleasure therein, but did not find himself moved to greater kindness for Morris. He owed him nothing, and did not see why he should not have his try at the mark. All he wanted was fair play, and if he missed, he hoped he'd take his luck without whining.

Then he heard Morris moving in his room, and the sound in the loneliness of the night made him sorry, and struck him with a pang of something very like remorse. He had been thinking of the bold rebel captain he had taken on the road. Now it was the pale young convalescent with the cut on his cheek, as he wistfully strained toward Cottonwood from the hill that afternoon. How frank and handsome he was! How the rich sunlight had flushed his thin face and gilded his straggling hair! And how madly fond he was of Miss Forest, and with what reason! The thought of her made Luce restless again, and he walked about the room. He heard the click of a gate and looked out. There he was, walking about the garden, down the path to the stream and across by the rude bridge. Here he came again, crossing the brook higher up on the stones, not minding a wet foot. Poor boy! how he was tormented. And what was it all about? Why was the brave young fellow turning out when he ought to have been asleep, and walking uneasily across and around? Who but he was the cause? Was he not coming between him and his love, and taking advantage of his extravagant

notions of honor and obligation to plague him in his own house and drive him wild with doubts and impatience? How would he like to have had some one making up to that Alice when he was her fool? How *had* he liked Dudley Clark, in fact, when the little devil was playing them off against one another and amusing herself with their rage and hate?

He heard him come in, and then the light streamed out of Morris' window and shone as long as Luce knew. He was of many minds and moods before he lay down, and he did not sleep a great deal.

While he was dressing in the morning, Tony, a young imp of darkness who waited on him, brought him a letter. It was from Morris, and was in these words: "I can only see one way out of this. I challenge you to fight with such weapons as you choose, and according to the usages customary among gentlemen. If you accept, the details can be easily arranged without the knowledge of my family. If you refuse, I shall consider that I am under no further obligation to allow you any privilege in this affair, and shall expect you to keep out of my way. I shall still owe you for the risk you took on my account, and make you very welcome as long as you care to stay in my home. Let me have your answer immediately."

Luce had already made up his mind. At breakfast Morris was brighter and freer than he had been. Afterward he gave Luce a cigar, and they stepped out at the window and strolled down into the fields. They came among a clump of trees and stopped.

"Did you get my note?" asked Morris.

"Yes," answered Luce.

"Well, what is your answer? Do you accept?"

"I refuse," said Luce, continuing to smoke.

"You do?" Morris echoed, throwing away his cigar. "Then I consider that you have forfeited any right you may have had in this matter, and I warn you to keep out of my way. Down here we consider that men who refuse to fight are—" He saw Luce's face turn quite pale and his hand go up and fumble at his throat, and he did not finish.

Luce leaned back against a tree and said:

"I wouldn't repeat that, if I were you. We consider your code of honor barbarous and brutal. And a pretty settlement you'd make of it! You must have a high regard for the lady that you can't let her choose between us, but would have the bullet choose for her and make the one left her a murder-

er. I declare I don't believe you care for her half as much as for yourself. I think I care more for her than that. But that's neither here nor there,—I'm going to cut adrift from you and steer my own boat, and you can do the same." He turned and walked back to the house, went up and packed his luggage, came down and found Miss Morris and her father, and bade them good-bye, with thanks for their kindness and frank regret at going away.

Morris insisted upon carrying him over to the town, but Luce was impatient to be alone, and would only let him send his luggage.

So he went away and walked over toward the river and up it to the camp-ground, where he had spent that memorable month. Then he took the well-remembered road he had ridden so often. He had not been over it since he had come galloping back to camp with a lump in his throat and a bitter ache and blindness. And they came back to him now as he recalled them, trudging back on foot.

It was late afternoon when he came near Cottonwood, and sat down to look among some bushes a little way off. The negroes went about the place as of old; he heard old Esop's croaking voice berating some young hopeless, and the youngster's high chatter and yap-yap. There was General, the great St. Bernard, and the smaller fry of dogs about the cabins. All was the same. He heard a horse, and Miss Ellen came cantering up the avenue to the door. Esop came and took the black mare; Luce knew her very well,—Camilla was her name. The old negro seemed to be making some complaint to his young mistress, and while he gibbered and gesticulated the lady stood, with the sunset lighting up her face and figure, straight and fine, her arm straight down and holding the skirt of her habit, her other hand around the mare's white nose, and her face intent and displeased. She made an impatient motion and settled the matter with a few words, pointing them with her whip. Then she went into the house.

When she was gone Luce turned back among the bushes and lay down and cried.

He had made up his mind, it is true; but it was hard, harder than he had thought. He rebelled against the making of the world; that all the rest should be nothing and this one girl all, and that out of all she was the one he must not come near! When he looked at it, it seemed incredible, and yet it was true.

What was the use of going away? There

was nothing else to go for. Country and home lost their meaning to him. Honor and courage were words, and no more.

Oh! he could not go away without seeing her, hearing her speak. Why should he not? He would only be saying good-bye. And he would praise Morris to her, tell how brave he was, and how true and kind;—that would be brave, would it not? And then he knew that it was the lying devil of weakness and cowardice that put that false pretense in his heart.

And he rose up and ran. He did not stop till he came to the river. And he kept on as fast as steam would carry him, and never stopped, night or day, till he reached home. He came across the fields from the station, the old familiar woods and fields. He noted the crops and the cattle in the twelve-acre, the mowing machine ringing over the hill. There was corn in the barn-lot, sickly and yellow-looking too: it must have been a cold, wet spring. He had not thought he would be so glad. And when he went in upon mother and sister Louise, I need not tell of the laughter and happiness and the tears that were in more than two pairs of eyes. The dear hearts that had lain down so many nights with fears and anxious prayers for the absent boy thanked God that night out of trembling lips.

Luce clung close to those two as if he were afraid of losing them or himself. He made himself the boy again. He went in and out, stopping with one or the other all day long, and talking over all the trials and pleasures of their life and his own—all but one. And one evening as they sat together in the dusk he told them his strange adventure with the Cottonwood family and the rebel captain. He did not tell them quite all, but his manner then and since his coming home, and their own hearts told them the rest, and they were very gentle with him while he stayed. Presently he went back to his command, and the great tragedy drifted on around him and swept him along. It carried him across States, and back and forth through all sorts of fighting and maneuvering,—once into hospital with a ball in his thigh. Finally, it carried him wounded into the enemy's hands, and so into one of the military prisons. What kind of place that was need not be told.

Luce was sent there in May. In July he was transferred to another place and confined on an upper floor with some seventy more in one great room. About dusk of the 20th of October, as the guards were being relieved, a rather stout, bearded officer, in the

battered dress of a Confederate colonel, came up and entered the place. The relieving sentinel came up a moment after, and the one who had seen the colonel enter went down. The light was dim, and there was a good deal of noise and confusion. The colonel walked down the length of the staring den, scanning sharply the faces that turned on him no loving looks. At the far end he stopped before one of them, at a loss, and asked:

"Is not Captain Luce confined here?"

"I am Captain Luce," was the reply. "Who are you?"

The colonel looked closer. "So it is," he said. "My God! I wouldn't know you."

He opened his coat. Under it was another, doubled down and buttoned round his body. He took it off and gave it to Luce. He took off his hat; it was two hats, one inside the other, and he pulled them apart.

"Put them on," said the colonel.

It was the uniform coat of a rebel captain.

"Now then," said the colonel, "come with me."

Without a word or a hand-shake, without at all knowing what it meant, Luce passed out from among his miserable comrades, down the stairs, across the yard and to the outer gate. The colonel said, "Come along, captain;" gave the word to the guard, and they walked out side by side. The fresh, free air, the stars shining overhead, the sight of women and children, the odor of flowers from some garden, overcame him, and he tottered and walked crookedly like a drunken man. The colonel took his arm under his own and spoke to him sternly:

"Keep up now, if you don't want to go back."

Go back? Not to that place, alive! He walked straight and quick. They passed right through the heart of the town. Hundreds of people jostled them on the narrow sidewalks. They climbed a steep block or two and came among the quieter streets. Then they came out into the country. They crossed some fields and entered a piece of woods. Luce heard a neigh, and then saw two horses hitched to the branches.

"Can you ride fast now, do you think?" asked the colonel, loosening one of them.

"I think so," Luce answered. "Let me try."

"Get up, then," he said, and helped Luce to mount.

There was a road just beyond. They rode out and turned to the north. They rode hard, over out-of-the-way, rough, hilly roads. After a little while Luce could only cling

blindly to his horse, and let him go clattering after his mate. He was nearly dead when the horses stopped, and the colonel came and helped him off. It was in a wood again, and there was a stream close by. The moon had risen. The colonel hunted a few minutes and found a bundle that had been hidden under a rock. It was clean clothing, and Luce had need of it. He bathed himself in the brook and let it float away his foul old clothes. When he was dressed again he felt refreshed. They mounted and rode on into a small town and up to the door of a public house. It was near midnight, and the landlord had to be waked to let them in.

"Here are your horses," said the colonel; "I will take mine early in the morning. Give us anything you've got to eat and a bed."

The victuals were none of the choicest, but Luce ate like a starved dog.

When there was nothing left, they went up to their room. Luce sat on the bed awhile thinking, and then said:

"Is this all a dream? Who are you? Tell me what it means."

The colonel pulled off his beard for reply.

"Captain Morris!" said Luce.

"Colonel, if you please," was the answer. "Here is a letter which you will be glad to see. It was months in reaching me. It was sent under cover to one of your commanders, and sent by him across the lines."

It was from Luce's sister Louise, and one can imagine how eagerly Luce read it.

"Now get to bed," said Morris. "You will need all the rest you can get."

So they lay down together a second time. In the morning they rode on. Their road lay off from the lines of railroad and telegraph. Everywhere they found horses waiting for them. Luce made out that Morris had come over the same ground with some other companions, and thus had relays of horses all the way.

It was in the afternoon, sunny and pleasant, and they were riding slowly for the first time.

"Morris," asked Luce, "what do you hear from home?"

"All well," Morris answered; "Florry and father and—and friends."

He glanced aside at Luce, and they rode on in silence, both thinking of the same things, no doubt. They skirted the breast of a hill, and Morris checked his horse, and pointed down the valley. "Look there, Luce," he said.

Luce saw through the trees the gleam of the tents of a camp, and the sound of a fife and drum came up suddenly. He moved his horse forward and peered down till the wind lifted the flag and the sunshine fell on it. Then he could have cried, and indeed he did not lift his face from the horse's neck for a minute. When he did, Morris said:

"Well, here we part company. Is there anything you'd like to ask me?"

And Luce answered: "Yes, one thing."

"I wanted to tell you, but didn't like to," said Morris, keeping his grave face, but with a happy light in his eyes; "I'm a happy fellow, Luce. Won't you come down and see us when this is over? No? Well, I don't know but it's best. I couldn't if I was you. But I couldn't have gone away as you did—you're a brave fellow, Luce."

"We may not see each other again," he went on. "I wish you'd keep that horse to remember me by—don't say anything; I'll take it as a favor. Good-bye, now—shall we call it square?"

"I should think so," answered Luce. "I wish you joy, Morris; take good care of her; good-bye."

And so, with a hard grip, these enemies turned their backs on one another, and rode each toward the camp of his friends.

THE WHITE FLAG.

"IN Oxford (England), last May, there was much perplexity and surmising among the inhabitants regarding the appearance of a white flag, floating from a staff on top of the city jail. It appeared that the flag was hoisted by the governor of the prison, to denote the extraordinary fact that, for the first time in many years, he had no prisoners under his charge. According to a time-honored custom, the prison doors were thrown open, and all persons were allowed to pass in and out according to fancy."—*London Daily News*.

UPON the cold gray prison-walls
The yellow sunshine lies ;
Up to the cold gray prison-walls
Men lift their wondering eyes.

For there against the English heavens
Of softly clouded blue,
Borne by the spring winds gallantly,
A banner floats in view.

And men breathe freer as they gaze,
And women shed glad tears,
And little children toss their hands
With shrill and clamorous cheers.

The bolts and bars are all flung back,
The keepers lounge and sleep,
While through the gates and empty cells
Great tides of people sweep.

Oh, generous hearts, blind eyes, look forth !
To-day flings wide and free
A colder, darker prison-door,
Yet no man turns to see !

This very day on English hills,
O'er English rocks and crags,
Flutter unnoticed in the wind
A million snow-white flags.

Hung out along the verdant slopes
They wave in hush of noon,
The Iris's proud gonfalon,
Herald of coming June.

The clustered pennons of the Rose,
Which float in stainless calm ;
The Brier's long budding streamers,
The Lily's oriflamme ;

The waft of tender Lilac blooms,
Rifled by humming thieves ;

The beckon shy of Violets
Couched in their hiding leaves ;

The waving arms of Clematis,
Poised on its airy seats,
The shining signal-lamps which light
The disks of Marguerites ;

While in the deeper valleys
Where soft, warm breezes play,
A myriad tiny semaphores
Flutter and dance all day.

But few men guess for what sweet sign,
Thus flung against the sky,
From top of Nature's fastnesses
The flowery banners fly.

Few hear the fragrant speech, which tells
Of liberty like air,
Of a thousand prison-cells thrown wide,
For lack of prisoners there ;

Of a grim and sleeping warden
Whose hand grasps fetters still ;
Of open doors, where a great tide
Of merry folk at will

Sweep in and out, and spurn the bars
Which once their strength defied,
And spurn the jailer where he lies
His frosty chains beside.

Oh lily, flaunt your bannered snows,
Wave, roses ! never cease !
All beautiful upon the hills,
Sweet publishers of peace !

Wave till the dull eyes laugh with glee,
The heavy hearts all sing,
And the wide world with rapture hails
The liberator, Spring.

AMERICAN IRISH AND AMERICAN GERMANS.

It might fairly be assumed that a discussion of the comparative fecundity of the Germans and the Irish in the United States would be at any time of both scientific and popular interest; but in view of the differences in the political affinities and political aptitudes of these two elements of our population, so strongly developed within the past few years, the question which of the two is increasing with the greater rapidity becomes of peculiar importance. Coincidentally with this added reason for desiring to know the respective rates of increase of the American Irish and the American Germans, we have the fact that the country is now for the first time in possession of certain statistical information, which, though primarily applicable to uses far more general, may, through somewhat remote, yet wholly legitimate, statistical methods, be brought to the determination of this question. Although the material referred to has been for more than a year accessible to all, the use to which it will be put in the following discussion does not seem to have occurred to any one. The plan here pursued being, therefore, not only new, but presumably somewhat more difficult than usual, it will be necessary to ask a careful attention, step by step, to the course of the argument.

It should be clearly noted at the outset that the question is not of the ultimate capability of increase in either the German or the Irish people. In Germany and in Ireland the respective quality of the two races has been tested, on a scale far greater than that of their transatlantic rivalry, for a much longer period of time, and under conditions which allow the progress of each to be measured far more accurately and certainly than the information at command in respect to their increase on American soil will permit. In this home competition, the Irish people certainly did from 1831 to 1841 maintain a rate of increase unusual in the history of Europe. Were we bound to attribute the superiority to a greater physical vigor, a presumption clearly would be established, in advance of positive data, that the two million representatives of this people within the United States are making a greater proportionate contribution to our population than the one million and three-quarters of Germans resident among us. But this is not a necessary deduction from the known fact of a more rapid increase of the Irish at home; nor is

this view of the case generally accepted by writers on population. The lower classes, both of Ireland and of Germany, are traditionally pressed for the means of subsistence. The supply of food for children born to parents in common life is never in excess, never abundant, but on the contrary is always meager and often deficient. Under this condition, the rate of increase will be determined very much by the standard of life which the common people set for themselves, and by the degree of prudence and self-restraint with which they are able to maintain that standard. The Irish have shown that they are willing that population should increase up to the limit of subsistence on a potato diet. The German will at least have black-bread for himself and his children to eat; and the increase of population is therefore limited, for that people, within the capacity to provide cereal food, scantily, it may be, but sufficiently for the support of life.

These facts are so notorious, and the rapid multiplication of the Irish prior to the famine of 1846 has been so uniformly accepted by economists and writers on population as due to the lower standard of life and the want of self-restraint among the common people, that it is only necessary to dwell on the subject here long enough to disclaim any inference, from the experience of the two nations at home, in favor of the more rapid increase of either in the United States, where the condition of the people in respect to food is entirely changed, it being as a rule true in this country that an able-bodied laborer who is sober, frugal and industrious can find shelter, clothing, and food for all the children that in the course of nature are born to him: shelter, clothing and food, moreover, not of the quality and in the degree essential to health and comfort alone, but with some margin for choice in respect to kind and amount, above the absolute necessities of life.

The question before us is, how, under these new conditions, the Irish and the Germans in America increase relatively to each other. It is undoubtedly an almost universal opinion throughout the Eastern States, an opinion, moreover, which extends in a considerable degree over the entire country, that the Irish exhibit much the higher degree of fecundity.* There may be persons whose oppor-

* We use the word "fecundity" throughout this paper in a restricted sense, as expressing the *effective*

tunities for observation have been such as to persuade them of the contrary; there may be communities where the opposite view prevails; but the general belief is quite clearly what has been expressed.

It is easy to explain this belief. The Irish immigration was the first to reach us. The accounts so frequently repeated, in connection with the Famine, of the prodigious increase of this people, have combined with the observations made by our own citizens in contrasting the increase in the families of these foreigners with the rate prevailing among the native population, to give this opinion almost the currency and authenticity of a proverb. An opinion thus generally diffused is not soon or easily displaced from the popular mind. The Germans came later; they went largely to other portions of the country, where the rate of increase in the native population was more rapid than in the communities to which the Irish tended, where, consequently, the contrast between native and foreign habits was much less striking, and where, moreover, speculations on the laws of population were not much indulged in. Hence it is that the belief first formed in respect to this matter has so generally held its place, and that it is so common to speak of the increase of our Irish citizens as transcending that of any other portion of our population. It is the object of this paper to show that the belief is a mistaken one; that the Irish among us, as they have placed themselves and as they are occupying themselves, are not contributing to the general increase of the population in a degree exceeding that of the American-Germans; on the contrary, that while, in the absence of direct or positive proof, absolute assurance cannot be reached, the probabilities incline, and incline strongly, to the greater fecundity of the latter element.

With so much of preface, we may pass to the treatment of the statistical material available for the proof of these propositions.

Since and including 1850, the Census has given the number of persons in the United States of foreign birth, as well as the number of these belonging to each principal foreign nation. Thus, to take only that which pertains to our subject, the Census of 1850 showed 2,244,602 persons of foreign birth; the Census of 1860, 4,138,697, and the Census of 1870, 5,566,546. At these dates the numbers of the Irish were successively 961,719,

1,611,304, and 1,855,779; and the numbers of the Germans, 573,225, 1,276,075, and 1,690,533. Comparison of these figures shows that from 1850 to 1860 the Germans increased relatively to the Irish, as well as to the total foreign population; while from 1860 to 1870 they increased relatively to the Irish, though not to the total foreign population. The effects thus exhibited have, however, been wrought by immigration. The question which we are interested to discuss relates to the next generation; to the increase of this increase; to the proportion of children born respectively to German and to Irish parents in the United States.

The Census of 1870, for the first time, affords information which, though it was intended primarily to answer a somewhat more general purpose, is susceptible of being treated to yield statistical evidence of a cumulative character, competent, when in sufficient degree, to establish successively a presumption, a probability, or a certainty, upon the one side or the other of this question. The new feature thus introduced into the Census is the statistics of Foreign Parentage.* There are now shown for every State and county of the Union, by turns, the numbers successively: (1) of persons having a foreign father; (2) of persons having a foreign mother; (3) of persons having one or both parents foreign; (4) of persons having both father and mother foreign. For the purposes of the following discussion the third of these classes will be taken. We have, then, for the determination of our question, four facts in respect to each State and county.

1. The total number of persons of foreign birth.
2. The number of persons born in Ireland.
3. The number of persons born in Germany.
4. The number of persons having one or both parents of foreign birth.

Two things need to be said in respect to the relation of Nos. 1 and 4 above. First, No. 4 substantially includes No. 1, all persons of foreign birth in the United States having, as a rule to which there are only the most inconsiderable exceptions, had parents who were also of foreign birth; so that the number of persons *born in this country of foreign parents* is practically obtained by subtracting No. 1 from No. 4. Second, in each State and county, by turns, the excess

increase by birth, deducting any excess of losses by death at early ages in one nationality over the other.

* Tables IV. to VII. inclusive, Statistics of Population, Ninth Census, 1870.

of No. 4 over No. 1 consists substantially of the children of those embraced in No. 1. There are exceptions to this rule, but not enough to affect in any important degree its accuracy or authority. Those exceptions are where the children of foreign parents have emigrated from one county or State to another, and where persons are found in any county or State whose parents were foreigners, but have deceased since their arrival in this country. Such instances are numerous in themselves, but they are so inconsiderable in comparison with the whole body treated, and they may so certainly be presumed to exist on both sides, so to speak, of the question, that, for the purposes of this argument, it is precisely the same as if they did not exist, and it therefore remains true that the excess of No. 4 over No. 1 is made up, practically, of the children of foreign families (foreign as to one or both of the heads thereof) living in the county or State.

But while we have thus the number of Irish and of Germans, together with the total number of foreigners, and the American increase (substantially) of such foreigners, we do not know how this increase is distributed among German and Irish families. This is, in effect, what we are seeking to obtain. It has never been given in any form. Yet though the census does not give us the number severally of children in the Irish and the German families of any one county in the United States, yet, having the facts above indicated, we may be able so far to resolve them as to yield results sufficient to show very distinctly any marked predominance of one element over the other. It will appear further on whether this has been successfully accomplished or not.

It has been stated that we have for each State and county of the United States four facts: the number of foreigners, the number of Irish, the number of Germans, and the increase of the foreign population. Now it is evident that if the Irish and the Germans were everywhere in equal proportions, whether exactly or approximately equal, we should have no clue to their fecundity. But if it should be found that in nearly every State and county a new ratio appeared,—the Irish in some cases very largely predominating, the Germans in others,—we should be able thereupon to institute comparisons, to ascertain whether the increase of the foreign population was habitually greater according as it was composed in a larger degree of the one or the other of these elements. A single instance, where the preponderance of one of these

foreign elements was shown to be accompanied by an unusually large number of children of foreign parents, would justify no positive conclusion, inasmuch as in one such instance the excess might be due to any one of several causes, among which might even be an exceptional fecundity on the part of one of the minor elements of the foreign population, neither Irish nor German. Moreover, if the excess of foreign parentage should be discovered, now in communities where the Irish predominate, now in communities where the Germans predominate, without any appearance of system, it would not be safe to infer the superior fecundity of either the Germans or the Irish by reason of finding the number of such instances slightly greater on the one side than on the other, though such a result might, if the comparison had been carried far enough, fully justify the provisional, or even the definitive, rejection of a superiority previously claimed and popularly allowed, in respect to the nationality thus disparaged by the investigation. If, however, the balance should be found to incline steadily, and with something approaching regularity in degree, on the side of one of these foreign elements, its preponderance being, in by far the larger number of communities, accompanied by an increase in foreign parentage; and if, in the absence of any opportunity for direct and positive proof, it should be found that the further these comparisons, embarrassed though they be by extraneous elements (foreign, but neither Irish nor German), were carried, the wider became the divergence, it would be safe and just to pronounce, at least provisionally, pending an actual count, this stock to be the more prolific.

Such being the conditions under which this inquiry is to be prosecuted, and such the material available for the purpose, let us proceed to discuss the States of the Union according to the method proposed. And in order that our procedure may be as short, simple, and certain as possible, it is desirable to confine the inquiry to those States which meet certain reasonable conditions.

First, it will add little to the value of the results, and much to the labor of the investigation, to include those States which have only an inconsiderable foreign population. In rough, wholesale computations like the present, we can only feel assurance when we are treating large bodies of people. From the table following will therefore be excluded all States having less than ten per cent. of their respective populations of foreign birth. In this class are embraced all the former

Slave States except Maryland and Missouri, and also the States of Maine, New Hampshire, and Vermont. This may seem like a large exclusion, and if it were a question of taxation or of Congressional representation it would be such; but in a discussion of the law of increase in the foreign population it is otherwise, the aggregate number of foreigners in these seventeen States being only 7,000 in excess of the number found in the single county of New York. It will thus appear that the omission of so much of the foreign population cannot be a great loss in an investigation like the present; while the statement that these seventeen States contain more than half the counties of the Union, will serve to show how much the time, space, and labor required for the discussion are reduced thereby.

Second, it is further right and expedient that those States should be excluded, the foreign populations of which, though considerable in the aggregate, are not composed in a great measure of either Irish or Germans. This is so clear that it does not need to be dwelt upon. The virtue of the inferences to be drawn, in the course of the computations proposed, depends upon the degree to which foreign elements not Irish or German may, in the nature of our material, be disregarded.

When, therefore, such elements extraneous to our inquiry appear in numbers to overwhelm the elements we desire to treat, the best use that can be made of these cases is to drop them. They can contribute nothing of value to the result, and must cause confusion, as well as add to the labor of the work, whenever introduced. In this view it is proposed to exclude all States which have foreign populations composed less than one-half of Irish and Germans combined. The States thus ruled out are California, Kansas, Michigan, Minnesota, Nevada, and Oregon, all but one or two of which would have been excluded under the rule next following.

Third, it is necessary to exclude all States which are so new as to defeat the object of investigation, by reason of the fact that time has not been allowed for the clear development of the tendencies which we are discussing. Populations that have doubled or trebled by immigration within five or ten years, manifestly must exhibit such disturbances as to render useless inquiries like the present in respect to them. It is difficult to say just where the line should be drawn to cut off States in this condition. It is clear that in addition to the Territories, and to some of the States mentioned under the

second head, Minnesota, which increased between 1860 and 1870 from 172,023 to 439,706, should be excluded. It seems best also for the integrity of the discussion that Iowa, which increased within the same period from 674,913 to 1,194,020, showing a rate of growth nearly double that of any State remaining on the list, should be omitted. This leaves but twelve States for investigation: a small number, seemingly, yet these States embrace more than eight-elevenths of the foreign populations, while, of the two specific foreign elements, they account for a still larger proportion, containing as they do 1,526,250 out of the 1,855,779 Irish, and 1,345,457 out of the 1,690,533 Germans in the United States.

Having thus obtained our list of States, let us further divide them as Irish or German States, according to the preponderance of the one element or the other, and present them, thus arranged, with all the facts pertinent to the present inquiry. In Table I. each of these States will be found, with the following statistical information: 1st, the number of persons of foreign birth; 2d, the number (embraced of course in 1) born in Ireland; 3d, the number (embraced also in 1) born in Germany; 4th, the number of persons resident in the State, one or both of whose parents were born abroad; 5th, the number of persons in 4 to every 1,000 persons in 1. Inasmuch, however, as one term of the ratio is thus constant, viz., always 1,000, only the other term is expressed in column 5. Thus the entry 1,792 against Connecticut signifies that there are in that State 1,792 persons of foreign parentage to each 1,000 persons of foreign birth. As has before been remarked, the 1,792 in this and all similar cases substantially includes the 1,000; the excess, 792, indicates, for all practical purposes, the American increase of the 1,000 foreigners.

It will be seen by the following table that the number of persons of foreign parentage to each 1,000 persons of foreign birth is, in the six Irish States, severally as follows: 1,717, 1,772, 1,792, 1,853, 1,955, 2,111; in the six German States, 1,942, 1,969, 2,093, 2,174, 2,281, 2,410; in the six Irish States collectively, 1,941; in the six German States, 2,084. From this it would appear that the number of persons born in the United States of parents born abroad is approximately as follows: in the six Irish States, 717, 772, 792, 853, 955, 1,111; in the six German States, 942, 969, 1,093, 1,174, 1,281, 1,410; in the six Irish States collectively, 941; in the six German States, 1,084.

TABLE I.

STATES.	FOREIGNERS.	IRISH.	GER- MANS.	PERSONS OF FOR'N PARENT- AGE.	RATIO OF COL- UMNS 1 AND 4.
IRISH.	1	2	3	4	5
Connecticut	113,639	70,630	12,443	203,600	1799
Massachusetts	353,319	216,120	13,072	625,211	1772
New Jersey	188,943	86,784	54,001	350,316	1853
New York	1,138,353	528,806	316,902	2,225,627	1955
Pennsylvania	545,261	235,750	160,146	1,151,208	2111
Rhode Island	55,396	34,534	1,801	95,999	1717
Total	2,394,911	1,160,624	557,765	4,652,108	1941
GERMAN.					
Illinois	515,198	180,162	203,758	986,035	1942
Indiana	141,474	28,698	78,060	341,001	2410
Maryland	83,412	21,630	47,045	181,362	2174
Missouri	222,867	54,983	113,018	465,125	2093
Ohio	379,493	82,674	182,597	645,115	2261
Wisconsin	364,499	48,479	162,314	717,832	1969
Total	1,699,343	358,666	787,692	3,541,170	2084

Now there can be but two rational explanations of a preponderance so nearly uniform and so decided. Either the German States show a higher degree of fecundity because they are German States, the excess in the number of persons of foreign parentage being due to qualities of that stock as developed on American soil (which is to admit everything in controversy), or, the entire foreign populations of these States, without distinction of nationality,—German, Irish, British American, Swedish, and Norwegian alike,—are more prolific because of the greater freedom of life in the West, and the more general pursuit of agriculture. It may be premature to assume here the truth of the first explanation offered, but it must be noted that the second, in effect, no less concedes the whole ground. Whether the latter group of States are increasing so much more rapidly than the former because they are German States, or because they are mainly agricultural, it is still of record that 63 per cent. of the whole number of Irish in the United States are residing in States which exhibit the ratio 1,941 : 1,000, while only 18 per cent. are residing in the States with the ratio, 2,084 : 1,000. On the other hand, 46½ per cent. of the Germans of the United States are found in the latter group of States, and presumably share in the general increase of the foreign population characterizing this group, while but 33 per cent. are found in the former group. So that, in the least favorable view of the case, the Germans of the country are, by virtue of the general movement of the foreign population of the country, if not by their own inherent quality, increasing, as matter of fact, more rapidly than the Irish.

But a somewhat extensive and laborious investigation has convinced the writer that the more rapid increase of the German States is only in part due to differences in location and occupation. If the statistical information which has thus far been used in the discussion were only given by totals of States, the inquiry could be pursued no further, and each of us would have to be content with his own private opinion as to the cause of the facts exhibited in 'Table I.' But we have precisely the same information given in respect to each county of the United States, and a canvass of counties in the States which we have discussed appears so strongly to corroborate the opinion expressed as to justify the exposition of the results, even at the risk of some added tediousness.

It is neither necessary nor desirable that all the counties of these States should be taken for the purpose; but it is essential that the selections should be made upon a determinate principle. The grounds of exclusion have been very much the same as those taken with respect to States. First, only those counties have been treated which have a considerable foreign population. For this purpose the limit was fixed at 5,000. Second, all counties have been excluded where the foreign population is made up, less than one-half, of Irish and Germans combined. Third, counties in which these two specific foreign elements are found in proportions corresponding in general to those of the State at large, are also counted out. It is obvious that the inclusion of such counties would be entirely without significance, while their number would add much to the time and space necessary for the discussion. And here it should be noted, that it is on the variation of counties from the ratios prevailing through the State that the whole value of this second stage of our investigation depends. If the Irish and Germans of a State were apportioned uniformly, or nearly so, among its counties, nothing could be added to what has already been given on the subject. But in fact these elements are in nearly every State very irregularly distributed. Strong German counties are found in Irish States, and strong Irish counties in German States. It is by separating these from the mass of the counties which conform to the general proportions, and discussing the facts of their population by the same method which we have applied to their States, as wholes, that we are able to approach more closely to the inmost truth of the case.

By the application of the several rules indicated, the counties with which we have to

deal have been sifted down to 91, distributed as follows: Connecticut 6, Illinois 14, Indiana 5, Maryland 2, Missouri 5, New Jersey 7, New York 21, Ohio 8, Pennsylvania 15, Wisconsin 8. No counties of Massachusetts or Rhode Island were taken into account. The German population in both States is wholly inconsiderable (not reaching in either case four per cent. of the total foreign population), and, small as it is, is divided with more than usual evenness among the counties.

These 91 counties have been divided as German and Irish counties, according to the following principle: In classifying the States, those were taken as Irish States in which the numbers of that nationality exceeded the numbers of the Germans. In dealing with counties, however, we consider those as Irish counties in which the proportion of Irish to Germans is decidedly greater than the proportion prevailing in the State at large; those are taken to be German counties in which the proportion of Germans is greater than in the State. Thus, the State of Illinois has, in round numbers, five Germans for every three Irishmen. Peoria County has 3,493 Irish to 4,399 Germans. It is therefore ranked as one of the Irish counties of Illinois, not that it has more Irish than Germans, but because it has a larger proportion of Irish than is found in the State as a whole. On the other hand, Adams County is taken into the account as one of the German counties of Illinois, inasmuch as the proportion of Germans to Irish (8,808 to 1,549) is much greater than five to three. This scheme of classification, applied to the 91 counties taken, yields 48 Irish and 43 German counties.

Now, if it be true that the superior fecundity of the foreign population in States where the Germans abound is due to that excess of Germans, and not to other and indifferent causes, we ought, as a rule, to find in peculiarly German counties a proportion of persons of foreign parentage exceeding that of the State at large; and on the other hand, if the Irish tend to increase at a slower rate, we ought, in the great body of instances, in counties peculiarly Irish to find this proportion below the average. Whatever the truth of the case, instances on one side and the other are to be expected, as a matter of course. It is only the preponderance of instances which could determine the question; and in order to give assurance to either view, the preponderance on the one side or other should be decided.

The following table shows the number of

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counties distinguished as German and Irish, according to the principle stated, which yielded results under this test favorable and adverse, respectively, to the theory of a superior fecundity in the American Germans over the American Irish. Let us repeat: whenever an Irish county shows a foreign parentage equaling or exceeding that of the State to which it belongs, it has been taken as an instance adverse to the theory. Whenever such a county shows a foreign parentage below that of the State at large, it has been taken as corroborating the theory. Whenever, on the other hand, a German county in the respect indicated falls below the State, it has been taken as an instance adverse; and whenever such a county rises above the State, it has been deemed an instance favorable. The words *pro* and *con*, in the caption of the several columns of the table, are used in this sense.

TABLE II.
SELECTED COUNTIES.

STATES.	IRISH COUNTIES.		GERMAN COUNTIES.	
	Pro.	Con.	Pro.	Con.
IRISH GROUP.				
Connecticut	2	1	3	
New Jersey	4	2	1	
New York	9	6	4	2
Pennsylvania	5	3	4	3
	20	12	12	5
GERMAN GROUP.				
Illinois	2	4	7	1
Indiana	2			3
Maryland	1			1
Missouri	3		2	
Ohio	3		3	2
Wisconsin		1	5	2
	11	5	17	9

It will thus be seen, that of 91 counties selected by rules of exclusion of the highest degree of reasonableness, 60 are found to yield results corroborating the view that the superior fecundity of the Germans is due not alone to conditions of location and of occupation, but to qualities peculiar to that people on American soil. Thirty-one instances have been found in a degree more or less adverse to the theory.

TABLE III.
SELECTED IRISH COUNTIES.

IRISH STATES.	NO. OF COS.	FOREIGN-RES.	IRISH.	GERMANS.	PERSONS OF FOREIGN BIRTH.	RATIO OF COLS. 1 & 4
Connecticut	3	27,528	17,589	1,948	47,581	1798
New Jersey	6	58,865	28,034	11,168	105,897	1799
New York	15	348,086	192,831	71,734	669,466	1923
Pennsylvania	8	304,346	155,033	71,485	669,568	2003
Total	32	738,825	393,487	156,335	1,439,532	1934
GERMAN STATES.						
Illinois	6	216,550	60,506	82,391	379,225	1751
Indiana	1	18,021	5,686	8,650	36,859	2547
Maryland	1	7,969	1,847	2,312	16,770	2104
Missouri	3	139,816	40,256	70,338	279,525	1999
Ohio	3	66,566	15,193	22,838	117,088	1871
Wisconsin	1	5,150	1,729	1,173	10,575	2053
Total	16	450,072	125,217	187,896	840,082	1867

SELECTED GERMAN COUNTIES.

IN IRISH STATES.	NO. OF COS.	FOREIGN-RES.	IRISH.	GERMANS.	PERSONS OF FOREIGN BIRTH.	RATIO OF COLS. 1 & 4
Connecticut	3	74,009	48,597	9,893	136,580	1845
New Jersey	1	46,333	18,390	17,810	86,545	1868
New York	6	551,889	240,040	206,927	1,057,567	1916
Pennsylvania	7	122,759	38,229	51,917	269,605	2196
Total	17	794,992	345,256	286,547	1,530,297	1950
IN GERMAN STATES.						
Illinois	8	81,093	12,435	47,075	163,519	2016
Indiana	3	94,724	2,189	16,918	55,554	2247
Maryland	1	65,758	28,251	40,406	141,568	2159
Missouri	3	12,236	1,148	9,497	29,473	2409
Ohio	5	150,217	24,933	73,344	261,961	2179
Wisconsin	7	118,793	11,405	80,577	233,603	1983
Total	26	422,821	70,361	267,847	888,078	2100

But still there is another form in which it is desirable that the results of these comparisons should be presented. In Table II. one county has just as much value as any other. Now, although all the counties embraced in the list are important, none having been admitted with a foreign population of less than 5000, some have yet a much greater importance than others. With a view, therefore, to satisfy ourselves that the preponderance in Table II. is not apparent only, but real, we may aggregate the county totals by States, and again by groups of States, and apply the same tests to the selected counties thus massed, which we have applied to them singly. If the result shall be the same as in the case of the counties when treated as

equal bodies, we shall be very much disposed to hold that the superior fecundity of the Germans is not only made highly probable, but proved as conclusively as it could be in the absence of a direct count. The importance of this comparison cannot be disparaged, the counties taken, though but 91 in number, containing in the aggregate 934,321 Irish and 898,625 Germans.

The relation of the foregoing table to Table I. is direct and manifest. Thus in Connecticut the ratio between the number of persons having foreign parents, and the number of persons of foreign birth, is, as appears by Table I. 1,792 : 1,000. In the three peculiarly Irish counties of that State, however, the ratio is only 1,728 : 1,000, while in the three German counties the ratio is 1,855 : 1,000. In each case, the result is to corroborate the theory of the superior fecundity of the German element. But in New York, while the Irish counties conform to the same rule, the German counties fail to reach the average of the State. Examination of the table in connection with Table I. will show, that out of twenty cases (two for each State), fifteen favor the theory we have advanced, and but five are adverse. Three of the latter constitute exceptions of importance, viz., the German counties of Maryland, New York, and Ohio. The two remaining, affecting as they do but one county of Wisconsin and three of Indiana, are of slight consequence.

When, however, we aggregate these figures by groups of States, we have a testimony wholly favorable to the theory of German superiority in the particular mentioned. The 32 Irish counties of the Irish group of States, when taken collectively, exhibit the ratio 1,934 : 1,000 ; the 16 Irish counties of the German group, the ratio 1,867 : 1,000. The 17 German counties of the Irish group exhibit the ratio 1,950 : 1,000 ; the 26 German counties of the German group the ratio 2,100 : 1,000. In each of the four cases we have a distinct conformity to the rule, a concurrence certainly remarkable.

It needs to be strongly insisted upon here that the whole force and effect of the deductions from the comparisons instituted in Tables II. and III. are additional to what is derived from Table I. The first table showed that the German States, both severally and as a group, maintain from one cause or another, whether because they are largely German or because they are mainly agricultural, a higher rate of increase than the Irish States similarly treated. Tables II. and III. show that the peculiarly German counties, whether in the German

States or in the Irish States, are as a rule above the average of the States in this respect; while the peculiarly Irish counties, whether in Irish States or in German States, are with equal uniformity below the average. The result of these comparisons is, therefore, not only to heighten the effect of Table I. by exhibiting the fact of German increase more

strongly, because more relieved from the embarrassment of extraneous elements, but also to indicate almost unmistakably the cause of such increase; viz., qualities of stock independent of, or additional to, effects of location or occupation.

Am I entitled to write? *Quod erat demonstrandum.*

A SEANCE WITH FOSTER, THE SPIRITUALIST.

CHARLES H. FOSTER was in Cincinnati during the latter part of November. My attention was first drawn to him by the accounts of several friends, whose experiences as related to me were so interesting and remarkable that I overcame no little prejudice and promised to sit. The substance of these experiences was such, that to admit there had been no jugglery,—that Foster had no preknowledge of the facts he professed to reveal, and which were among the most secret and sacred in the lives of the sitters, was to admit the existence of some mysterious agency or principle wholly foreign to ordinary ideal and sensuous perception. I preferred to believe in both jugglery and preknowledge, and preliminary to my sitting selected a test subject of which I am confident Foster knew nothing. Fortified with this and several commissions to be executed for friends while I should be in communion with the "spirit which, though dumb to us, would speak to him," I knocked for admission at Foster's door. But others were before me. The spacious parlor of the Burnet was quite dotted over with groups of waiting friends. It was my good fortune to join one which had had a prior sitting, and our turn at last came. Foster came into the parlor, recognized the party, which by this time had dwindled to two, and as we approached said, calling me by name, "I am glad to see you."

I had never seen him.

"You look incredulous," he added, "but I will tell you some things more surprising still. Come to my room."

We followed and sat down at a small plain table, covered with an ordinary cloth, and furnished with pencils, paper, and a card about four inches square containing the alphabet and numerals; the paper in long slips such as are used for newspaper copy.

When fairly seated, Foster asked me to write the names of a number of persons, and

among them the name of the person whose spirit I wished to invoke. The names were written across the slip, and each one, as written, was torn off, securely folded lengthwise, then doubled and thrown on the table. He took them up, one at a time, pressed them to his forehead, selected the right one without having opened the paper, and wrote the name, as he said, in the handwriting of the deceased. The resemblance, however, was not close. I had invoked this so-called spirit to answer the following question of a friend:

"Mr. A. wishes to know his greatest weakness and his greatest wickedness?"

The question written and the paper folded as before, I was directed to take the card and read the letters slowly, for the purpose of spelling out the answer. The spirit rapped at each letter as needed, but perhaps not more than two or three letters had been so designated, when Foster exclaimed, "Ah! it comes to me," and seizing his pencil wrote rapidly as an answer,

"Too vacillating."

"But that, Mr. Foster, is answer to half the question only."

"Ah! yes! You want to know his greatest wickedness. The spirit declines to answer that."

Again the paper had not been opened, and it may be said here that seldom more than two or three letters were rapped; the answer being anticipated—very frequently without resort to the card, and oftentimes before the folded paper had fairly left the hand. A slight rapping, that seemed to come from the center of the table, accompanied the giving of each answer, whether resort had been made to the card or not.

This and the other commissions attended to, I came to the main test, and wrote three names with especial care that Foster should not see so much as the motion of my hand, and as he was at the same time answering a

question for the lady, it seems certain that he had not seen my writing. His first selection from the folded slips was wrong; the second, right. The presence assured, I then wrote with equal caution,

"How did you die?"

"Suddenly."

"But that, Mr. Foster, is not a sufficient answer. By what means did this person die?"

At this I was directed to write several ways of meeting death, and include the particular way in this instance. I wrote *poisoned, murdered, drowned*. The answer was correct, *drowned*.

"Where are you buried?"

I gave the usual list, mentioning the place. It was at this point of the sitting that I experienced an unusual feeling, not of awe altogether, but that fairly extorted an exclamation of wonder. It is easy to see now, in the light of reflection, that there was no more real occasion for astonishment than at preceding points of the sitting; but then the answer came with startling suddenness and accuracy. Before two letters had been fully rapped, the paper pellet fell from its position against Foster's forehead.

"This is very singular," he said; and with his pencil in a few nervous dashes struck the crude outlines of a wonderful scene. "My mind is drawn towards the west, to California. Here is water, here a noble road and gateway;" and at each phrase a new line was added to the sketch. "Here a place where bodies are received, and here a mountain,—Lone Mountain, Lone Mountain Cemetery, San Francisco, California. Is it right?" The raps said yes, and he had truthfully answered. A little effort of the imagination in aid of his rough sketch, served to bring vividly to mind the vision of this same solemn mountain which bears its city of the dead in ominous silence over the city of the living below, and whose lone round top overlooks the bay and measures its days in the ebbing of the tides, as they sweep in majestic flow through the Golden Gate into the vast expanse of the Pacific beyond.

In its essentials the sitting here ended, and I was left to reflect over what had been certainly a most remarkable exhibition. Wholly unaccompanied by any of the extraordinary spiritual manifestations,—thunderous knockings and ghostly presences, with accounts of which all are more or less familiar,—it yet presented the extraordinary spectacle of a man, an entire stranger to me, telling me events in the history of a third party of whom also he knew nothing. How did he get the

knowledge? Foster claimed a supernatural agency, invoked and addressed it as a spirit, and in reply to my direct question stated definitely that he conversed with spirit forms visible to him but invisible to me. The claim is not conceded, yet how was he able to truthfully tell that this person whose spirit he professed to call up, had died suddenly, was drowned, and lay buried in a remote cemetery of peculiar and unusual name? It was just such abstract statements of mysterious disclosures by Foster that had led me to see for myself,—the only satisfactory course to those who desire to investigate. The statements of others are from our very prejudices taken with the largest grain of allowance, if not with entire disbelief, whatever be the usual credibility of the witnesses.

Desiring to give Foster's power full range, my questions were so worded, in the test case more especially, as to give no clue to the answers; and my first disappointment after all the marvelous statements made me, and the first damaging blow to the spiritual claim set up by Foster, was the requirement, as a condition precedent to an answer of the spirit, that *the answer should first be written*. This *sine qua non*, which had not been mentioned in the previous accounts of Foster's modus, at once removed a large element of the marvelous from his doings. I had not thought otherwise than that my agency in answering a question ceased when I had asked it. The difference is about this; whether, if A. asks what number he is thinking of, the number be at once given, or he is first asked to multiply by six, then by three, to cut off the right-hand figure of the product and give the remainder,—a puzzle familiar to most school-boys. In one instance there is a clue, in the other none.

Another point: If a question admitted an answer of more or less general application, I was not required to write the answer, but if the question admitted specific answer only, the answer must first be written. The answers to several questions, as in the case of Mr. A. first given, were general and such as might have applied with equal pertinence to any other man. What judgment is more in the mouths of the people than that "he is too vacillating?" or of what man, when the final moment of dissolution comes, may it not be said, "he died suddenly?" The answers to these questions were given by the spirit without having been first written down. But when a specific means of death, or a particular place of burial was asked for, the answer must first be written. If the spirit could without my

mediation tell Foster my name, could not the same spirit without my mediation tell him the burial-place of its own body?

This singular inability of the spirit to answer test questions unless the answers had first been written, once noted, another peculiarity was observed; namely, that the answer of the spirit came in the exact language of the answer as written. The spirit's answer "drowned," for instance, was identical with the written answer—nothing more, nothing less, even to the form of the verb; and "Lone Mountain Cemetery, San Francisco, California," was a literal reproduction in form and arrangement. In short, when the medium was puzzled, the spirit was puzzled, and wherein the written answer failed, the spirit failed; an excellent test of infringement of copy-right. For instance, let it be said the name of the spirit invoked was George Kant Jones. The *a* in Kant was so written as to be indistinguishable from an *e*. Foster slurred Kant in announcing the spirit and could not give it correctly. There is confirmation of this spiritual weakness in the report given me by a gentleman who had a sitting with Foster a few weeks since in St. Louis. He had written,

"Will it pay to speculate in lard?"

The *ar* in *lard* was indistinct, and the spirit mistaking the word for *lead*, answered in keeping with the state of the lead market.

Summing up the results, it may be said in brief, that Foster told nothing of a specific nature that had not been by written answers first told him. But with this conclusion, the ground of inquiry is narrowed and shifted only, and there remains a certain something to be explained. True, the answers of the spirit were reproductions of the written answers, yet these must have been known to Foster to have been used by him. How did he get the knowledge? The first theory of explanation, and that which most naturally occurs, was that of sleight of hand—magic in the more restricted sense of the term. Many tricks of the peripatetic wizard seem equally inexplicable. Take as an illustration the fish trick of Herrmann, who comes in tight-fitting dress-coat to the front of the stage. Without assistance and standing alone, he shakes out a large handkerchief, spreads it over the left hand and arm, which is bent and extended before him, and then with the empty right hand reaches under the handkerchief and brings out half a dozen goldfish swimming in a glass dish, with the water streaming over the sides and splashing on the stage. Or take again the trick of the oriental fakirs, who dig

the ground, sow the seed, and cause it to sprout and mature into fruit; all within the space of a few minutes and before one's eyes that have been strained in vain to discover some sleight. It cannot be said that Foster's discovery of the contents of the folded papers was not a trick to be classed with these of legerdemain, for it was impossible to know that some preconcertment had not existed. The visible surroundings seemed against the possibility of jugglery, however. The room was a large one, in a much frequented part of the hotel, its occupants changing day by day; the table a common one, almost bare of furniture, and a third party in the room, a close and interested observer of all passing. Besides, my own eyes were attentive, and, in the preparation of the questions, every precaution that occurred had been taken, even to the provision of my own pencils and paper. Still, distrust of the senses and a feeling as of imposition remained clear and distinct above these usual evidences of fairness. But, avoiding the extreme of spiritualism on the one hand, and belief in trickery, which we so readily make the scape-goat of our prejudices, on the other, might there not be some intermediate means of explanation? This question I sought to answer—with what degree of satisfactoriness will be seen. Let those who wish, investigate for themselves. I have formed no opinion, express none.

One of the first steps after the sitting was to call on a lady whom I knew to have been an excellent medium in years gone by, and to have ceased to sit because of her entire disbelief in the canons of spiritualism, and the disagreeable association of her name in that connection. With much reluctance she yielded to my request for a sitting, but having discontinued for so long, she expressed doubt whether *it* would write. This unconscious use of the pronoun of the third person was odd, and plainly shadowed her inner idea of the agency about to be called into play, as a strange and unwonted force, if not one essentially of the *non ego*. We sat down entirely alone, and remained perhaps five minutes without any manifestation. Presently there was a slight motion of the fingers; the lady spoke of a sensation of pain extending from the wrist to the shoulder, and of swelling of the hand. In an instant more, the hand was seized with quick and violent motions that brushed the paper from the writing-desk and threw the pencil to the opposite side of the room. Twice I recovered it, and twice the same thing was repeated, except that the last time

two words were legibly written. Once more, and two verses were given, in good meter and including the original two words. Again another two, and so on, the pencil each time taking up the thread where it had been before laid down, until two stanzas had been written. The subject-matter was singularly definite and applicable, but wholly out of belief. Dale Owen says that during a sitting with Foster in 1861, he saw the letter F appear in pink script stroke on Foster's wrist. The circumstances as given by Owen are very strange, but the test of blood-writing as made by Foster is too arbitrary, and offered with too great frequency and readiness to be taken as convincing proof of spiritual interposition. Let each one be convinced by signs about which he can have no doubt.

The royal commission appointed by the French Government in 1784 to examine into the doctrine of animal magnetism, as stated by Mesmer, reported adversely; but the pronunciamiento, while it put out Mesmer's before bright light, bore against the truth of the theory, not against the facts of Mesmer's practice, as demonstrated over and over again by Mesmer himself and by D'Elson before the commissioners of whom our Dr. Franklin was one. The facts were admitted, and attributed not to animal magnetism, but to over-wrought imagination. Why quibble over a name? The strange power producing the phenomena of the magnetic state will be known quite as well if called imagination as if called animal magnetism. It is singular that Dunglison, while referring to this French commission and its condemnation of Mesmer's theory, should make no allusion to the subsequent French commission brought about by Foissac in 1826, which five years later gave the unanimous report of its nine members that animal magnetism *is* a force, not of the imagination, and capable of exerting a powerful influence over the whole human system. A similar English commission, appointed long anterior to pronounce on the practices of Dr. Greatraker, whose remarkable cures seem to come well attested, reported that a "sanative contagion existed in Dr. Greatraker's body that had an antipathy to some particular diseases and not to others."

Mesmer's theory is the existence of "A fluid universally diffused, and filling all space; being the medium of a reciprocal influence between the celestial bodies, the earth and living beings; insinuating itself into the substance of the nerves, upon which it has direct effect; capable of being com-

municated from one body to another, animate or inanimate, and at considerable distance, without the assistance of any intermediate substance," etc., etc. The condition of those fully under the influence of animal magnetism he termed "animal magnetic sleep." The phenomena of the state of magnetic sleep are too familiar to need mention here; but it is desirable in this connection that the idea of an *operator* and a *subject*, so prominent in Mesmer's doings and teachings, be not lost sight of.

On what usually received natural premises are we to account for these phenomena, or those of somnambulism? Shall it be said, after the manner of the royal commission in Greatraker's case, that there is an inherent antagonism of the mind to its usual relations to the body, under certain conditions of the latter? or that the mind or body, or both, are in abnormal condition? What have we, then, but a meaningless general term, serving now as a cloak to ignorance, just as in former times the abhorrence of nature to a vacuum was given as the explanation of the water-column *in vacuo*? "I do not pretend," says Deleuze, "in any manner to discover the causes of the phenomena of which I have spoken. The wisest way is not to search for an explanation. For in our waking state we can very well recognize, by the effects, the existence of a new faculty in somnambulists, but we can no more determine the nature of it than they who are blind from birth can conceive the phenomena of vision."

The facts of mesmerism and somnambulism are indisputable. Call the two agencies what we will, it still stands out in the broad light of frequent observation that they are two of several avenues leading to a possible condition of the human organism, in which peculiar powers and tendencies are exhibited. And these two avenues, one natural, the other artificial, seem parallel if they are not coincident. Why not lay aside the fallacy of disbelief in all that cannot be explained by usually received formulas, and seek more thorough and definite knowledge of a province bordering so closely on that of every-day life, yet given over wholly to the barbarians in almost every scientific chart.

"How is it," says Haven, "that the sleep-walker, in utter darkness, reads, writes, paints, runs, etc., better even than others can do, or even than he himself can do at other times and with open eyes? *How* can he do these things without seeing? and how see in the dark with the organs of vision fast

locked? The facts are manifest; not so the explanation. * * * Is there an inner consciousness, a hidden soul life, not dependent on the bodily organization, which at times comes forth into development and manifests itself when the usual relations of body and soul are disturbed and suspended? * * * Whatever theory we adopt, or even if we adopt none, we must admit that in certain disordered and highly-excited states of the nervous system, as when weakened by disease so that ordinary causes effect it more powerfully than usual, it can and does sometimes perceive what at ordinary times is not perceptible to the eye or to the ear; nay, even dispenses with the use of eye and ear, and the several organs of special sense. This occurs, as we have seen, in somnambulism, or natural magnetic sleep. We meet with the same thing also in even stranger forms, in the mesmeric state, and in some species of insanity."

One of the instances quoted by Haven, who is not original in his suggestion of the inner sense and higher soul life, is that of a young girl of inferior ability, in a school for young ladies in France, who competed with her classmates for the prize in painting. After a time she saw, as she resumed her work in the mornings, that additions had been made by a hand far more skillful than her own. Her companions denying all knowledge of the matter, she blockaded her door; but still the mysterious additions continued to be made, and remained unexplained until her companions, setting watch on her movements, saw her rise in her sleep, light her lamp, dress and paint. The picture took the prize, the young girl protesting that it was not her own. Ennemoser speaks of an apothecary who read his prescriptions through the ends of his fingers, and always made them up best when in the somnambulant state.

Illustration of the strange power exhibited in somnambulism is also found in dreams. Mrs. Howitt, in the preface to her translation of Ennemoser's work, *Der Magnetismus*, gives the following:

"The printing of this Ennemoser translation had commenced, and to a certain extent my mind was imbued with the views and speculations of the author, when on the night of the 12th of March, 1853, I dreamed that I received a letter from my eldest son. In my dream I eagerly broke open the seal and saw a closely written sheet of paper, but my eye caught only these words in the middle of the first page, written larger than the rest and under-drawn, '*My father is very ill.*'

The utmost distress seized me, and I awoke to find it only a dream; yet the painful impression of reality was so vivid, that it was long before I could compose myself. * * * Six days afterward, on the 18th, an Australian mail came in and brought me a letter, the only letter I received by that mail, and not from any of my family, but from a gentleman in Australia with whom we were acquainted. This letter was addressed on the outside, 'Immediate,' and with trembling hand I opened it, and true enough the first words I saw, and these written larger than the rest, in the middle of the page and under-drawn, were, '*Mr. Howitt is very ill.*' The context of these terrible words was, however, that, 'If you hear that *Mr. Howitt is very ill*, let this assure you that he is better.' But the only emphatic words were those which I saw in my dream."

So of presentiments: A physician of this city tells me that a gentleman who had only a short time before left, to be gone several weeks, suddenly returned, having been strangely impelled by a feeling of trouble at home. The physician was at the time in attendance on the gentleman's child, which had fallen dangerously ill during his short absence.

And of apparitions: It is related of Goethe that, riding along a lonely portion of the way, he saw himself coming, on a queer-looking horse, and clad in costume much like that of Petruchio "in an old hat and a new jerkin." Horse and costume were singularly unlike his own. The incident had passed out of his mind when, years afterwards, passing the same spot, he remembered his vision and recognized it in the horse he rode and the costume he was then wearing.

Petetin speaks of a cataleptic person unable to see or hear, but he observed that she could hear when he spoke close to the pit of her stomach. Soon afterwards she was able to see and smell in the same manner, and had the power to read a book even when something lay between. If a non-conducting substance lay between, she took no notice of it. Van Helmont says that after partaking of a certain preparation "he felt movement and sensation spreading themselves from the head over the whole body, yet the whole power of thought was really and unmistakably in the pit of the stomach; always excepting a sensation that the soul was in the brain as the governing power."

The accounts of the convulsionnaires are incredible, and instances of prophetic vision on the approach of death, and under the influence of narcotic stimulants, are numerous.

Without multiplying from the hundreds of instances in which the records and our own experiences abound, all illustrative of the abnormal state, the two following are yet added from Ennemoser, an author whose patient and protracted research has furnished a ready-made key to much of the vast literature bearing on this most interesting subject.

"In the 17th century Xaverius had urgently recommended a crusade against the pirates of Malacca. During the preparations, and even at the very time of the battle itself, Xaverius fell into an ecstatic state, in which, at the distance of two hundred Portuguese miles, he was, as it were, a witness of the combat. He foretold that the victory would be on the side of the Christians; saw that one vessel which sank before the departure of the fleet was replaced by another; described every minute particular of the battle; stated the exact order; imagined himself in the midst of the struggle, and announced the arrival of the messenger on a certain day. Every particular of which was fulfilled in the most remarkable manner."

"On a fair day," says Zschokke, "I went into the town of Waldshut, accompanied by two young foresters who are still alive. It was evening, and, tired with our walk, we went into an inn called the Vine. We took our supper with a numerous company at the public table * * *. One of my companions, whose national pride was touched by their raillery, begged me to make some reply, particularly in answer to a young man of superior appearance who sat opposite and had indulged in unrestrained ridicule. It happened that the events of this very man's life had just previously passed before my mind. I turned to him with the question whether he would reply to me with truth and candor, if I named to him the most secret passages of his history, he being as little known to me as I to him. * * * He promised if I told the truth to admit it openly. Then I narrated the events which my dream-life had furnished me, and the table learned the history of the young tradesman's life, of his school years, his peccadilloes, and finally of a little act of roguery committed on his employer's strong-box. * * *. The man, much struck, admitted the correctness of each circumstance; even, which I could not expect, of the last."

We incline to question the truth of such statements, yet Zschokke was a man of ability and note in his day. We know the tendency to soften the crude outlines of facts so as to fit them into the vacant niches of belief; to fill up a cavity here

and knock off a jagged corner there, much as the mason breaks and cuts and plasters the stone into his foundation-wall. Yet with all this the substance remains, and certainly nothing related by Zschokke or foretold by Xaverius is more remarkable than experiences told me, within the time my attention has been given to this subject, by those whose testimony in all ordinary matters would be regarded as unimpeachable. Robert Dale Owen, collating many instances into his *Debatable Land*, welds them into the strongest plea for Spiritualism that has probably been written. But such a conclusion seems repugnant, and the disposition is rather to agree with Ennemoser that "spirits as intermediate beings are out of the question; that it would be a strange occupation for them, and we are not aware by what means they could make their communications."

We know these extraordinary manifestations are not the results of what we usually call man's natural agencies, and if the supernatural be denied, where shall we rest? Admitting the truth of the representative instances cited, and accepting the teachings of the Mesmerists, a basis is found on which all may stand; and coincidences, intuitions, presentiments, dreams, second sight, apparitions, somnambulism, vision, clairvoyance, and even prophecy, appear in simple connection, as varying degrees of a state, which perhaps in its highest degree is nothing more than entire freedom from the cares of the body, and which may be reached by the open sesame of Mesmerism or the dread portal of Death.

"Magnetism," says some one whom Ennemoser quotes, but does not name, "is even capable of setting free the original bright nature of man, in its various parts, powers, and relations, which can then express itself in many ways and in different degrees. *The power of magnetizing lies in every one*, but there must exist the power combined with the wisdom to apply it." If this be so, there seems but one error in the saying of Plutarch, remarkable in this connection, that "It is not probable that in death the soul gains new powers which it was not possessed of when the heart was confined by the chains of the body; but it is much more probable that these powers were always in being, though dimmed and clogged by the body; and the soul is only then able to practice them when the corporeal bonds are loosened, and the drooping limbs and stagnating juices no longer oppress it."

Still further: "It may be doubted," says

Deleuze, "whether its [artificial somnambulism] sudden propagation has not produced as much evil as good, and whether it would not have been better that this marvelous phenomenon had not been at first observed, and that people had confined themselves to magnetism as Mesmer taught it, and as many persons before him practiced it, without knowing whether they employed a particular agent, or a faculty common to all men."

The first step is thus made toward an explanation of Foster's doings, by the mesmeric theory, in the knowledge that the "power of magnetizing lies in every one." A second step will have been made by the abandonment of the commonly received view that two persons are essential in Mesmeric operations, one strong, the other weak; the first attracting, then bringing into reckless subjection, much as the serpent fascinates the bird. Deleuze describes at length the processes of magnetism; but the teaching of later Mesmerists is to the effect that the "power of magnetizing" is not only "common to all men," but extends to the magnetism of one's self.

"The methods of modern magnetism," remarks Dr. Fahnestock, "are scarcely less absurd than those of Mesmer and his immediate followers. Some operators of the present day, who believe in a magnetic influence, still pursue the ludicrous methods of sitting down opposite to the patient, holding his thumbs, staring into his eyes, making passes, etc., etc." He remarks further that he has never noticed any perceptible difference in the susceptibility of persons, "which depends more on the state of the subject's mind at the time of trial than upon sex, temperament," etc., etc.

Again: "The operator has no power to produce this condition, and, independent of his instructions and his capability of managing while in it, has nothing to do with it. * * * *It is possible for any person to throw himself into this state at pleasure, independent of any one.*"

Dr. Fahnestock continues: "I have had over three hundred different individuals enter this state under my care, and have found by innumerable experiments that they are entirely independent of me, and can enter this state and awaken themselves whenever they please, notwithstanding all I can do to the contrary. They can throw the whole or any part of the body into this state at pleasure, and I

have seen many do it *in an instant*, a single finger, a hand, an arm, the whole brain, or even a single organ (or portion) *and awake them at pleasure.*"

"The powers of perception in this state, compared with the same function in a natural state, are inconceivably greater, and it is impossible for those who have not seen or made the necessary experiments to conceive the difference. Language fails to express it, and our common philosophy is too circumscribed to explain the reality."

"This function, when roused and properly directed, is extremely sensitive and correct, and most subjects, by an act of their will, can translate their perceptions to any part of the body, whether to the stomach, feet, hands, or fingers, and use them at these points as well as at any other."

"When a function of perception becomes active, while in a state of artificial somnambulism, it is enabled to perceive without the aid of the external senses."

If the testimonies of Dr. Fahnestock, who is still living, be true, he demonstrates the power of a person, thoroughly in the somnambulatory state, to read the mind of another, far or near, and in this position he is supported by numerous writers.

Assuming for the moment the truth of the mesmeric propositions already quoted, and what does there lack of a full explanation of Foster's so-called invocation of spirits but fuller practical knowledge of this vast field of little-explored artificial somnambulism, against which, maybe with just and proper prejudice, we so determinedly shut our eyes? Capable of taking on and laying off the somnambulatory state in an instant, he appears simply as a trained clairvoyant of variable powers; strongly clear-minded when he speaks my name or reads my thoughts without utterance on my part; more feebly so when it is necessary to write them down, in order to better define them to his dimmer perception, or enable him to read them through his fingers' ends; whose very imperfections of clairvoyant power may be attributable to possible lack of a "meditative mind, great prudence, severe manners, religious dispositions, gravity of character, positive knowledge, and other qualities," which, according to Deleuze, are essential to complete availability of the somnambulatory power, and which made Ste. Hildegard so noted for her power of magnetic sight.

THE TIDES OF THE SEA AND THE TIDES OF THE AIR.

GIORDANO BRUNO expiated at the stake the crime of teaching the motion of the planets differently from the Ecclesiastical authorities of his time, and Galileo, at a later period, only avoided a similar fate at the expense of an embittered life and a blasted reputation; but in this age of intellectual progress the most humble searcher after truth may venture to differ from "authority," though it passes wide-spread recognition and acceptance—and may even promulgate what he deems to be a more correct interpretation of facts, fearing no severer punishment than the incredulity of those who have imbibed ancient notions, wrong though they may be.

With this introduction, which owes its presence to strong consciousness of the temerity of the following views, let me invoke a candid judgment and attention to the consideration of the phenomena of the Tides. It is a problem which equals, if it does not surpass in difficulty, any of those to which the student of nature finds himself opposed, and if I may not hope that the views I shall here present will carry conviction with them, I have strong faith that I shall leave my readers at least impressed with the knowledge of the insufficiency of the widely accepted theory which now claims to solve it, as written in the books.

To enter at once upon the subject: The current theory to which we have referred presupposes a condition of earth and water which has no existence in fact. It presupposes that the earth is entirely covered with water. This being assumed, it is argued that the attractive power of the moon, at times aided by the sun, will and does draw up a protuberance of water upon the side of the earth turned towards them. When in conjunction, three-fifths of this lifting power, aptly termed the *pull* of gravitation, is ascribed to the moon, and the remaining two-fifths to the sun. The reasoning here employed necessitates the coincidence of high water, *i. e.*, high tide with the meridian position of the moon; but the fact is, such coincidence has never been observed.

The ordinary tides vary as much as three hours from the time demanded upon the theory; while under circumstances which should triumphantly sustain it,—I refer to the conjunction of the sun and moon,—the flood tide differs by some 36 hours from the time at which it should occur.

It is one of Professor Huxley's profoundly philosophical utterances, that "A scientific

definity of which an unwarrantable hypothesis forms an essential part carries its condemnation within itself." With such sound doctrine to guide us, we may safely criticise the theory of the tides.

That the earth is entirely covered with water is, I think none of my readers will deny, an unwarrantable hypothesis,—for it is totally inconsistent with fact,—and I am of the opinion that it drags the theory of which it forms an essential conception into the category of those "which carry their condemnation within themselves."

I think we will be able to detect other discrepancies than this if we subject the theory to searching examination. The differences between the theoretical and actual times of the occurrence of high water have already been mentioned as one of them; but, contenting ourselves at present with the mere mention of it, we will find the theory numbered with another conception equally incompatible with truth; namely, that the tidal wave travels with the moon about the earth from east to west once in about 25 hours.

Now it can be shown in fact, and is continually recognized in the practice of mariners, that the tidal wave travels about the earth in precisely the opposite direction—from west to east.

That this is the real condition of things I shall shortly, I hope, abundantly convince you, and for its cause I would assign a new factor, heretofore entirely overlooked in the elucidation of tide phenomena, to wit, that of centrifugal force, springing from the law of gravitation, a force that whirls the water forward in mid-ocean, as the water is thrown forward on a revolving grindstone.

Guillemin, in his treatise on astronomy, after an exhaustive chapter on the tides, in which the "inequality of attraction" and the action of "distant molecules" are lucidly mystified, concludes, as it were in despair of a reasonable explanation, with the following statement.

"In a word, on one side the water is pulled from the earth, on the other the earth is pulled from the water." To Guillemin too must belong the credit of the announcement that "natural laws suffice to put a curb upon the fury of the waves," though as to the precise nature of these laws he leaves his reader to conjecture; and it is no wonder, seeing that not only he, but all

his compeers, are sadly perplexed to find the curb that shall correct the destructive fury of the wave, which travels with the moon at the rate of 1,000 miles per hour into the harmless pulsation whose energies are wasted on a few feet of ocean strand.

The moon theory of the tides originated with Aristotle. Pliny suggested an improvement on it in his "luni-solar theory." An attempt to improve upon this is found in the "Cotidal System," while this in turn is asserted by the "Derivative System" of Professor Norton, which conceives the moon to drag the wave (he uses the word drag) after it; but he too, like his predecessors, drags it the wrong way.

Let us examine now some other points wherein the theory seems to be defective. Since it ascribes the tides to the potency of both moon and sun, allotting two-fifths of the resultant to the latter, it should be expected that when the sun and moon are in quadrature there should be four different tides at one and the same time on four different parts of the earth, at least during the maximum period of this phenomenon. The fact is otherwise, and the theorists explain the discrepancy by declaring the waters to obey the behests of the moon, fashioning themselves into a compound neap tide, and robbing the sun of his just claim to a two-fifths share in the achievement.

At a quarter farther on the sun and moon are in opposition; they have the earth between them, and hence exert their attractive energy in opposite directions. We should therefore expect, upon reasonable analogy, to find as the resultant a feeble tide, for the attracting forces should partially neutralize each other, and we should have, instead of the flood-tide which really occurs, but a fractional part, one-fifth, of the combined attractive powers as a surplus for tidal effect.

From these considerations we are, I hold, justified in seeking elsewhere for the explanation of the tides than in the theory which is plainly insufficient, and, when carefully examined, glaringly inconsistent with itself.

We may remark, in introducing the explanation we shall offer in its place, that there are other periodical phenomena, both in the living and lifeless kingdoms of Nature, which may as justly be claimed to be coincident with the phases of the moon as that of the tides, but in which to claim on that account relationship would be palpably absurd. They have their elucidation in, and are manifestly referable to, that harmonious pulsation of nature which exhibits itself in the throbbing

of the heart, in the motion of the blood, the vibration of sound, the "nodding" of the poles of the earth,—in all mechanical movements, and in the measured cadence of the waterfall as it rises and falls in its musical rhythms.

Herbert Spencer, in his chapter on the Rhythm of motion, says: "After having for some years supposed myself alone in the belief that all motion is rhythmical, I discovered that my friend Prof. Tyndall also held this doctrine." And here allow me to state that in my earliest aerial voyages I noticed this nodding motion in nature manifested in various ways: in sounds, in the undulations of the balloon's course, but most expressively in the rotatory motion of the aerial globe. In 1841, during an aerial voyage from the town of Danville, Pa., I noted the following in my log-book: * "During this voyage I observed a peculiar motion in the balloon, which had on former occasions drawn some attention from me, but which had not been closely investigated. It is this: When a balloon is sailing along with a steady current, while in equilibrium with the atmosphere, it revolves slowly on its vertical axis. This rotation is not at all times a smoothly continued circulation, but is *pulsatory*, like the notched wheel in a clock, as actuated by the pendulum. At first I attributed this motion to my breathing, believing the vibrations of the lungs sufficient to give a corresponding motion to so delicately balanced a thing as a balloon is when suspended in space. I held my breath as long as I could, and this was done several times, but the pulsations of the balloon were not interrupted by it; on the other hand, they became more audible during these experiments. Upon timing these pulsations I found them to be every two and a half seconds, and very regular. This left me at a loss to account for this motion, as it seemed not to be caused by my breathing, and did not correspond to the beat of my pulse." I noticed this peculiarity of the balloon's motion always when it was sailing along horizontally at great altitudes where it seemed to be uninfluenced by the irregularities of the earth's surface.

The ocean tides express this rhythmical pulsation as they beat the shores of the continent, in their breathing and heaving motions, keeping time as it were with nature's balance-wheel, universal gravitation. We see its evidences in the eruptions of volcanoes, in the earthquakes, in the great storms and

* *History and Practice of Aeronautics*, page 212.

floods, and we find it even in the animal system as exhibited in periodic and intermittent fevers.

Upon this view of matter and its movements, so impressively pointed out in the modern platform of philosophy, Correlation and persistence of force, I hold that we require no assumptions and no unwarrantable hypothesis in the explanation of the tides. Nature is not arbitrary in its ways, however arbitrary men may be at times in their ways of explaining natural phenomena. To say that gravitation pulls a little more here than there on the surface of the earth, in order to account for a little more tide here than there, as it in fact occurs, is to make nature as capricious as did the doctrine of the "crystalline spheres," wherein the philosophers held that the stars in the vault of heaven were riveted on these shells in a fixed manner, while a very few were left free to roam between the crystal shells, which they called wanderers (planets), to straggle about like drunken men.

In recent measurements of the earth it has been ascertained that its equatorial diameter is not a perfect circle but an ellipse: that is to say, the equatorial diameter which pierces it from longitude 14 degrees east to 194 degrees east (Greenwich), is two miles longer than that at right angles to it. (Royal Astronomical Society's vol. 29, 1860.)

These two bulges on the earth may have something to do with the gurgitation and regurgitation of the tides. The law of universal gravitation pervades all matter, from the minutest monad up to the most stupendous orbs. It is the *vis viva* of atoms as well as of worlds, since worlds are but atoms of a larger growth. We have the most sublime illustration of its universality when we cast our eyes upon the heavens, and we see it again in mysterious miniature form in molecular motion as revealed under the power of the microscope. So here as there we behold a life-giving manifestation spring out of the law of universal gravitation, tearing down at one place and building up at another; changing their configuration and altering the sinuosities of their water-lines. The labor of the tides in the past forms a marvelous history which the geologist is busy in deciphering.

It is an indisputable law of mechanics that a rotating body generates centrifugal force, as illustrated by the revolving grindstone as it throws the water on its periphery forward; and sometimes, when the centrifugal force is greater than the centripetal, it flies from its

center, *i. e.*, bursts. The globe we inhabit presents this motion, and its oceans should have a wave rolling round in accordance with this force from west to east, and so it has. Maury ascribes it to the "brave west winds," as sailors call them. They help, no doubt, but they too come from centrifugal force, and the air, being much lighter than water, moves so much more rapidly.

Allow me to term this the centrifugal theory of tides. I hold that centrifugal and centripetal force are the legitimate expressions of the law of universal gravitation; that the planets are subjected in their motion and orbits in accordance to the laws of natural distribution and compensation, agreeably to the quantity of matter contained in each respectively, moving in the direction of least resistance, which must necessarily be in the track of a circle, or nearly so, if we take the sun with its center as the centripetal point of our solar system.

The first authenticated records we have of this centrifugal wave rolling round the earth from west to east, are given in the log of the clipper ship "Sovereign of the Seas," in her remarkable short passage of eighty-three days from the Sandwich Islands to New York, in 1853, in accordance with Maury's chart furnished by our government. This ship made 16½ knots an hour in her easting for four consecutive days while riding this great centrifugal wave in her doubling of Cape Horn. And in the same year, by the same directions, the sailing ship "Flying Scud" made equally good time in easting, and made as much as 449 miles in one day, taking advantage of this fact of the great tidal wave.

But how does this wave produce two daily tides? It does not produce two distinct tides daily on the great southern ocean! Nor does it at all points intertropical. It only makes two tides, by gurgitation and regurgitation, as it is thrown out from its central crest into the seas between the continents, oscillating from one shore to the other, thus producing high and low water, or flood and ebb tide at the average intervals of twelve and a half hours; giving rise to all grades of tides in accordance to the shape of the seas and gulfs, bays and rivers, and their openings to receive it.

In the Bay of Fundy, with its mouth open to the swell tide, and contiguous to the Gulf Stream, it rises to the height of sixty and seventy feet, and, when assisted by a wind, to a hundred feet. In the Mediterranean, with its mouth nearly shut at Gibraltar, it rises only a dozen of inches.

And now as to the tides of the atmosphere. While they may not be so complex in their motion as the tides of the sea, because the ambient air is not encumbered with solid and obstructing continents to its movements, they are none the less grand and imposing when viewed in their positive action, and their economy in the great workshop of the universe of matter. The reason that we have no air-tide theories in the books is, because it is not long since men have learned how to get into the ocean above us, and even since that art has been acquired, very few have availed themselves of its uses. But it is a law of natural selection, that as mankind grows wiser, and more refined, so will also mankind aspire to occupy more room in space, especially that of the heavens above, and then we shall have more science of meteorology, and a better explanation of things directly connected with that science.

That there are atmospheric tides is no longer a question, but how they move, and what governs them, is a question, and one we are now going to briefly consider. The motions of the air, in what we shall consider as the great *atmospheric* tides, is caused by the same power, and governed by the same laws, as the motion of the sea. It flows round our globe from west to east, faster than the surface of its more solid matter, and this motion is caused by centrifugal force springing out of the rotary motion of our planet, agreeably to the law of mechanical forces. I can perceive no difference between celestial, or natural, mechanical forces, and those of artificial, or human contrivances. While this great atmospheric wave from west to east has no continents and shore-lines to give it the numerous variations of the ocean tide, it has nevertheless complex motions caused by the difference of temperature, to which it is so sensitive and obedient, and by which the chambers of heaven are more healthfully and more systematically ventilated than the best ventilated mansion that was ever constructed by mortal man. And this is an established scientific fact of every day's experience.

To a letter I wrote to Prof. Henry in 1849, on the subject of the law of gravitation, and the practicability of crossing the Atlantic ocean in from two to three days with a balloon, his answer, as to the latter proposition, was: "I have no doubt that there are great currents in the upper regions of the atmosphere, and particularly the return-currents of the trade-winds, which should blow continually from southwest to northeast. Should you conclude to make another aerial voyage,

I should be pleased to suggest some observations." These currents are the aerial tides, caused in this way: Around the equatorial belt of our globe we find the greatest amount of heat, as also the greatest amount of centrifugal force, and the combination of these two elements make it the great seething laboratory wherein are generated the phenomenal disturbances—no, not disturbances, but the sublime circulation of the ethereal fluid which we recognize in the gentle trade-winds, in the more animated equinoctial storms, in the roaring cyclone, and the fierce thunder-gust, distributing electricity and moisture to every part of the earth, ventilating all its departments of land and water, and giving vitality to all its beings. The tropical trade-winds blowing in from the northeast on the north side of the equator, and from the southeast on its south side, apparently contradicting the general flow of atmosphere from west to east, are really normal expressions of its scientific condition. Friction, heat, and convection drawing in the air below by *undertow*, then being heated as it rises, it is hurled outward and forward, that is to say, towards the poles and towards the east, giving rise to the upper and the lower currents of the aerial tides. The lower currents only were recognized in the old trade-wind theory; the system of the upper current was first pointed out by an obscure individual.

This great breathing apparatus of the equatorial lungs, in its truly organic inhalations and exhalations, produces the interesting phenomenon of a cloud belt round our planet of several hundred miles in breadth, presenting to our next-door neighbors, Mars and Venus, and to their inhabitants, if they have any, an appearance similar to that we behold on the planet Jupiter.

This great aerial wave sends off north and south the upper currents of its regenerated air, and these currents losing the centrifugal force acquired at the equator in the ratio as they proceed to higher latitudes, until they reach the polar circles, where there is very little eastward motion on the surface of the earth by its axial rotation, and where the same condition of calm exists as in the calm belt of the equator, but just the opposite of the equator in temperature, the air is forced back from the poles, because it cannot be packed there beyond a normal pressure, and because it also moves in obedience to the law of temperature and direction of least resistance, to wit: that cold air will flow towards a warmer point, as warm air will flow towards a colder point. We have this law

illustrated in a heated chamber; wherever there is an opening, at the window, or even the keyhole, there is a warm current outward, and a cold current inward; and woe would be to the inhabitants of a house that would successfully stop this circulation. And thus the air of the polar regions is returned to the equatorial belt by its flow southward, in what we recognize in our latitude as the northwest wind, sliding along under the upper and warmer southwest current.

We have a periodic oscillatory motion of this equatorial heat belt northward and southward from the true equator, manifested in the vernal and autumnal equinoxes, which gives rise to winds and rains peculiar to its motion, and in accordance to the laws of temperature as it affects the air. It also affects the temperature of the sea in its motions as manifested in the various gulf streams, but not in so great a degree, since water is not as elastic as air.

OUR POSTAL-CAR SERVICE.

AN English writer, describing the changes which were wrought in the postal service of Great Britain by the introduction of railroads, and, later, in connection with these, of "traveling sorting-carriages," enthusiastically exclaims that "by means of the extra railway facilities, the letters now pass along this line (the London and Birmingham) in a space of time so inconceivably quick, that some time must elapse before our ideas become accustomed to such a rapid mode of intercourse!" At the time this was written, Palmer's famous mail coaches were yet within the memory of some of the "oldest inhabitants" of England, and Sir Rowland Hill's postal reform was an affair of only yesterday.

The first railway post-office journey in England was made on the "Grand Junction Railway," between Liverpool and Birmingham, on the 1st of July, 1837; and it was upon the completion of this line to London, in January of the following year, that the railway post-office, or "Flying Mail," first started from the British metropolis for Birmingham. Owing to various circumstances, geographical, political, and otherwise, it was more than a quarter of a century after the success of the "Flying Mail" had been demonstrated in Great Britain, before any attempts were made in the United States to reorganize the mail service, and establish it upon a footing similar to that in England. The first vague efforts in this direction, which were simply experimental, took place under the administration of Postmaster-General Joseph Holt, who, in 1860, effected an arrangement with certain railway companies to run a mail train from New York to Boston, *via* Hartford and Springfield, by which the Southern mails, arriving in New York, could be immediately forwarded east, instead of lying over in the

metropolis until the following day, as the practice had been. This movement may be considered as the germ of the railway postal system in this country. The following year similar facilities were secured on the line between New York and the National Capital; and two years afterwards, the Post-Office Department adopted a plan, suggested by the late Colonel George B. Armstrong, who was at that time assistant postmaster at Chicago, for putting "post-office cars" on the principal railroads, in which mails could be "made up" by clerks, while *in transitu*, for offices at the termini and along the lines of such roads.

It was on the 1st of July, 1864, that the originator of this system, Colonel Armstrong, was authorized by Hon. Montgomery Blair, who was then Postmaster-General, to "test by actual experiment, upon such railroad route or routes as you may select at Chicago, the plans proposed by you for simplifying the mail service." On August 31st, of the same year, Mr. Armstrong wrote in answer to this letter as follows: "To-day I commenced the new distribution; but it will be confined to the offices on the line (the railroad between Chicago and Clinton, Iowa). This arrangement will so far test the scheme. I have no doubt of its thorough success. I will keep you advised of its progress." The first railway post-office here referred to left Chicago for Clinton on the morning of the 28th of August, 1864, on its trial trip; and on the 31st, the distribution of letters from it to stations along this route was commenced.

This was the inauguration proper of the railway post-office system in the United States, in its present form, which differs materially from the plan proposed and partially carried into execution in 1860. To the late

Mr. Armstrong, therefore, belongs the credit of establishing the railway post-office service in this country on a practical footing, and to him and Mr. Zevely, who co-operated with him in carrying out his project, are due the thanks of the American people for the superior organization of this most important branch of the postal service.

In October of that year (1864), an experiment was made on the route between New York and Washington, on Colonel Armstrong's plan, which gave promise of ultimate success. The post-office cars used on this line were fitted up under the personal supervision of Mr. Zevely, from hints obtained in Canada and elsewhere; but the interior arrangements, although elaborate, and in some respects almost elegant, were not such as would suit the ideas of the postal clerks at the present time. At the outset, the department selected clerks for duty on the cars mainly from among the more expert officials in the New York, Philadelphia, Baltimore, and Washington post-offices; and it was generally announced, or rather understood, that the service was to be operated on the basis of qualification and merit only. It was acknowledged, even then, that a high standard of efficiency would be absolutely necessary to secure success.

The next step taken in this new direction was on November 9th, when railway post-office cars were placed upon the lines between Chicago and Davenport, Iowa; and Chicago and Dunleith, Ill. On January 17th, 1865, the Chicago-Burlington and Galesburg-Quincy lines were established; and on May 22d, the first railway post-office service was put in operation on the Philadelphia-Pittsburgh route. About the same time, or a little later, postal cars were placed upon all the principal lines leading out of Chicago; and also upon the Hudson River and New York Central Railroads, between New York, Albany, and Buffalo, carrying and distributing along the line the Northern and Western mails.

While the railway post-office service rapidly spread and gained in public favor all over the West, its progress in the East was comparatively slow. For a long time the routes between New York and Washington, and New York and Albany-Buffalo, were the only two upon which postal-cars were running. After a period of nearly two years, however, the increasing success and popularity of the new service in the West, with Chicago for its central point and headquarters, began to affect the East, and infuse into that section of the country some of its own activity; and

thence onwards it continued to extend all over the United States, until, at the close of the late fiscal year (June 30th, 1872), there were in successful operation 57 lines of railway post-offices, or "post-offices on wheels," as they have sometimes appropriately been called—the routes of which extend, in the aggregate, over 14,117 miles, and employ a force of 649 clerks. The aggregate number of miles upon which service is at present performed is about 33,690 miles a day; or annually, a distance of 12,296,850 miles! In the contemplation of these facts and figures, collected from the official reports in the Post-Office Department, one may well exclaim with Lord Macaulay: "Our Post-Office is a splendid triumph of civilization!"

Wm. Lewins, Esq., in his interesting work on *Her Majesty's Mails*, published in London, thus defines the English railway post-office or postal car system: "It is like a gigantic machine, one part interdependent on another, and all alike dependent on the motive power of the different contracting parties." This applies exactly to our own railway post-office service, but gives a very inadequate idea of the operation of the system. This will be better understood by first ascertaining the object of the service. It is, briefly, to give to mail matter of all kinds—letters, newspapers, packages, etc.—identically the same several advantages and speed in transportation as is accorded to first-class passengers; so that, for instance, a letter may travel from New York to Chicago with the same degree of speed as a passenger, and without being subject to any extra delay at any station on the road. Under what was known as the old "route agent system," although large post-offices and cities enjoyed the advantages of through mail-bags or pouches, by fast trains, smaller offices were restricted to way-service on slow or accommodation-trains; and mail matter going any considerable distance from one small post-office to another, was subject to a delay of from twelve to twenty-four hours at one or more points of its journey. This used also to be the case with the southern mails for Boston, previous to the temporary arrangement of 1860, which was subsequently improved by the adoption of Mr. Armstrong's plan.

This plan, as subsequently carried into practical operation, constitutes the principle of the railway mail service, or system of "traveling post-offices." The car used at the opening of the first line between Chicago and Clinton, Iowa, on the morning of the 28th of August, 1864, was built and owned by the

railroad company, but was under the direct control of the Post-Office Department while in use, as is the case with all the postal-cars now running on lines in the United States. Competition among the various lines, which has manifested itself in the improvements and luxurious appointments of passenger coaches, such as palace-cars, sleeping-cars (and, quite recently, on some enterprising lines, bathing-cars, or cars containing alcoves with bath-tubs and all appurtenances for the convenience of passengers), had also a beneficial influence upon the postal-cars, which are now built by some companies without regard to cost, and solely with an eye to the convenience of their occupants and dispatch of business. It is especially on the Western lines that we meet with the modern postal-car in all its glory of latest improvements, fine upholstery, varnish and gold leaf. A fair specimen is one I saw on the Central Pacific Railroad, at Ogden, which might justly be called a palace postal-car. It was built in the company's shops, at Sacramento, Cal., under the advice and suggestions of Messrs. Barstow and Alexander, of the post-office department, and constructed in a very ingenious manner, with a view to economize space and facilitate the dispatch of business; while due regard had also been taken to the comfort of those who, on the long journey over the road and back, would have to occupy it as their home—bed-room, parlor, dining-room and work-room combined. One end of this car was taken up by a semicircle of boxes or large pigeon-holes, receptacles for newspapers and packages, each of which bore a label with the name of a station on the route, and connecting or distant routes. These boxes were so arranged that the person distributing the mail matter had every box within convenient reach. At the opposite end of the car were a number of smaller receptacles or pigeon-holes for letters, to the number of several hundred, all arranged in a certain order, and labeled with the names of stations and connecting routes. In the middle of the car was an apartment for the use of the clerks, with wash-stand, wardrobe, beds for three, a table, chairs, and other conveniences, not unlike the cabin of a vessel. There was also a place where a cooking-stove could be arranged for the convenience of the clerks, if they desired to keep their own *ménage*. The remaining portion of the car was set apart as storeroom for the mail-pouches, bags and packages, containing the through mail from San Francisco to Ogden, and further east, or *vice versa*, which does not

require assorting on the road. Several cars of the same pattern—all finished in the highest style of the art of car-building—have since been constructed by the same company and put upon their road, where they give universal satisfaction to the post-office employes and all others interested.

If any one desires to get a perfect idea of the sort of work performed in these railway post-offices, let him with me make the journey from Buffalo to Chicago, over the Lake Shore and Michigan Southern Railroad, in one of the postal cars attached to that route. I single out this line because it forms the highway, so to speak, over which the bulk of the western mails is transported, and therefore affords an excellent opportunity for observing the operation of the service. On this route, railway postal service is performed twice a day, and the number of letters handled on each single trip of the postal car averages from fifty to sixty thousand. There is some difference in this respect between the Western and Eastern mails, that while the former are frequently much above these figures, the mails going in an opposite direction seldom quite reach them; but the above may be set down as a fair average. This makes about one hundred thousand letters for the round trip; or two hundred thousand per day handled and distributed on this route alone.

It must be borne in mind that in the above figures is included only the *letters*; the *newspaper mail* is quite a separate feature, averaging about three tons a day. Toward the middle of the month, when the magazines are published and sent to mail subscribers throughout the country, the newspaper and package mail often reaches the enormous quantity of ten tons on a single trip. Wednesdays and Fridays, when the leading weeklies that have a national circulation are issued, are also "heavy" days on the postal cars.

If the reader will accept my invitation to make this trip, upon which he will find much to interest him, we will make the tour together at once, starting from Buffalo, which is one of the great postal centers of the country. The post-office cars used on this route show marks of the rough service they have to perform, and are not the dainty, elegant coaches I have seen on some of the western lines; as, for instance, the one on the Pacific road, already described. They are constructed with a view to hard work and durability, for they must resist the wear and tear of a speed of from thirty to sixty miles an hour, next to the engine and tender, and the concussion



INTERIOR OF A POSTAL-CAR.

of numerous "catchings." But what conveniences there are for the comfort of the inmates have been freely placed at our disposal, and I can guarantee every courtesy and facility that may contribute toward making the trip agreeable. We may as well begin with the beginning, and go through the entire performance. The western mail train does not leave the depot till twenty minutes past twelve o'clock; but early in the morning the railway post-office clerks have assembled at the Buffalo city post-office, in the room set apart for them, where each head clerk (there are usually three clerks on each postal car—one "head clerk" and two "assistants"), in his turn, receives from the "register clerk"

of the office the registered matter destined for points along his respective route, and lines beyond with which he connects.

The head clerk has receipted for his "registered" packages, say two hundred in number, for this trip, locked them safely in a pouch used for this special purpose, and is impatiently waiting for the signal of "all aboard!" which is regularly given by the mail dispatcher as the wagons are being loaded with mail-bags and pouches for the respective stations and connections. Soon the cry "Chicago—all aboard!" is sounded, and the three or more clerks who with us are to make the journey in the railway postal car, pick up their "traps," consisting of post-office

directories, maps, schedules of distribution, wooden or metallic tags and labels for pouches, working clothes, blankets, lunch baskets, etc.,—in fact, a complete outfit, suitable for the journey which lies before us,—and jump into the mail wagon, which is loaded to its utmost capacity with leather bags and iron-bound wooden boxes, *en route* for the depot.

A fine pair of sorrels soon bring us to the depot of the Lake Shore Railroad. Here a substantially-looking, but somewhat dingy car, with the words "U. S. RAILWAY POST-OFFICE" painted in large letters on the side, over the entrance, awaits our arrival, standing on a switch or side track, in close proximity to the outgoing express train. Our wagon is backed up to the car door, the bags, pouches and boxes composing our load are rapidly "piled" in, the clerks and ourselves jump after; and now business commences in good earnest. Such luxuries as hats, coats and vests are dispensed with, sleeves are rolled up, and leather pouches and canvas bags (the latter containing the newspaper mail) fly about in all directions. The "through," or direct sacks and pouches are piled up in the "through mail-room," in one end of the car, while the matter for distribution and overhauling along the road is stacked up in the working-room, in the fore and middle part of the car.

While all this is going on, we had better ensconce ourselves in a corner by the stove, behind the stacks of mail matter of all descriptions, and watch operations. We cannot possibly extend any aid to the clerks in assorting their loads of mail matter, for it requires a thorough knowledge and practice to handle the contents of the bags and distribute them in their proper places. Here, however, we are out of the way, while at the same time we have a good view over the field of operations, and can watch the *modus operandi* of distributing the mail.

To begin: the head clerk, who is in charge of the postal-car, and upon whom devolves the duty of distributing the through letter mails, stations himself before the letter case, numbering upwards of five hundred pigeon-holes, and commences operations by unlocking a pouch and dumping its contents,—consisting of some six or seven thousand letters, all tied up in packages of some eighty to one hundred or more each,—out upon the floor. The clerk picks up an armful of these packages, places them edgewise on the table or shelf in front of him, cuts open the strings by which they are held together, and "squares"

himself for further operations. These consist in assorting the letters of the loosened packages and placing them in the pigeon-holes in front of which he stands, with a degree of dexterity that fairly puzzles us. While the head clerk is thus engaged, his assistants are not idle. One of them has emptied out another leather pouch, and is engaged in distributing the contents of this in a smaller case of pigeon-holes placed on the side of the car, adjacent to the newspaper case. Upon inquiry we ascertain that this is the "way mail," destined for delivery at points along the route. Not only are "direct packages" made up for all the stations along the line, but also for connecting lines for points and routes beyond; nearly each of the more prominent stations on our line forming a distributing post-office for numerous smaller offices adjacent. The other assistant, who glories in the technical appellation of "paper jerker," is engaged in distributing the bulky newspaper mail in the other end of the car, and fires away at and into the tiers of labeled boxes in front of and all around him like a good fellow, seldom missing his aim or "jerking" a paper into the wrong box.

Meanwhile, bags and pouches are rapidly thinning out; but others are being filled with the assorted matter, and, after being tied up, or locked and "tagged," are dragged into the "through" room, ready for delivery at the larger stations. Indeed, we think that the work is well-nigh over, when a heavy pound-



AT WORK AT THE LETTER-MAIL.

ing on the door attracts our attention, and there is a wagon loaded to the top, outside, backing up against our car. The door is opened, and we are again flooded with mail-bags and pouches, to the number of upwards of a hundred. This is the late New York mail, by the Erie road. If we had missed it here, which sometimes happens when the train is behind time, it would probably have overtaken us at Dunkirk. But it just reaches us in the nick of time; the horses attached to the wagon which brought it are steaming and foaming, and have evidently had a hard run. Bump, bump, in come the pouches, helter-skelter, one on top of the other; bang goes the door, the receipt for "registered matter" is handed out through the open window; the gong sounds and in a moment, by some unseen agency, is our car attached to the train with a heavy thud which nearly throws us off our feet; the bell rings, passengers are running to and fro on the platform; the whistle shrieks; a jerk and a grating, jarring noise, and we are off, slowly moving out of the depot, at exactly twenty minutes past noon, on our way to Chicago and intermediate stations.

Clap, clap, clap, how it jars and rattles as we rush along at thirty miles an hour. The clerks are not idle; in less time than it takes to tell it, two pouches have been made up for delivery at Angola and Silver Creek—the two first stations on the road. As we dash past the depot at Angola, a bag is thrown off and another is caught without stopping. This is quickly opened and assorted; a work finished long before the bell rings, indicating a stopping-place, and we hear the brakemen shouting in the passenger cars, "Silver Creek!"

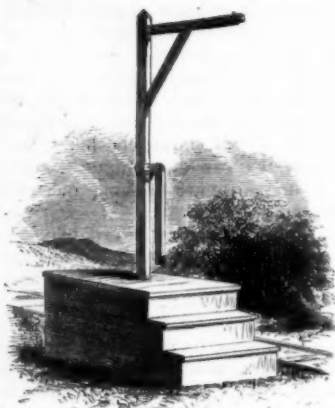
This place, on the shore of Lake Erie, about thirty miles from Buffalo, was once a prosperous harbor; but its trade and importance were long ago destroyed by the too close proximity of the larger cities of Dunkirk and Buffalo. The mail for this place, once quite bulky, has dwindled down to a single pouch of rather slim proportions, and the bag which we receive in exchange is slimmer still. We stop only about two minutes, and then are off again at a rattling rate, tearing along the shores of Lake Erie.

Dunkirk, forty miles from Buffalo, is the next point reached. During the five minutes we stop here, we receive fifty or sixty additional bags of mail matter, as this city is an important "accumulating" point in the railway mail service of New York State; "Dunkirk—all aboard!" shouts our head clerk; a

letter pouch is quickly closed, locked, and thrown off from the car, followed by two canvas bags containing newspaper mail. These are for Dunkirk City. In another minute two more bags are made up, closed, and labeled "Buffalo, Corry and Pittsburgh line," which road connects here; and are pushed off the car down upon the truck in waiting just as we are moving out of Dunkirk station.

Station follows station in rapid succession; but we do not stop, this being the through mail, or express train. Bags containing mail matter are thrown off at some places, and pouches are caught with a sudden thud and a jerk as we fly past. The interior of our car presents a more confused and busier aspect than ever. The clerks, working in their shirt-sleeves, scarcely speak a word, but work, work incessantly, like beavers. Bags and pouches are opened, emptied, and their contents distributed, with wonderful dispatch; the bundles of letters in the way-pouches are carefully picked out from among the mass of newspapers and other printed matter, and handed to the head clerk for examination and assortment, and the "paper-jerker" is desperately battling with a veritable avalanche of newspapers and magazines.

The "catcher" now adopted in the railway mail service is the one known as "Ward's catcher," and is chiefly remarkable for its simplicity and effectiveness. It operates in conjunction with a "crane," on which the pouch to be exchanged by the post-master of a way station is suspended shortly before the train is due at that point, in such a manner as to be easily caught by the apparatus attached to the postal car of a passing train, no matter how great may be the speed at which it is running. The "catcher" consists simply of a large, two-pronged iron fork, like a >, with one arm considerably longer than the other. The shorter arm is attached to the side of the car, just outside the door, in such a manner, that, when the catcher is not in use, or "down," both arms, or prongs, are placed vertically against the side of the car. When ready for use, the short arm is turned in its bearings by means of a lever, which operation causes the longer arm to project from the side of the car at an acute angle, the opening in the direction in which the train is moving. The moment the crane is reached, the pouch is caught with a jerk, the lever is turned, and the pouch relieved from the iron grasp of the catcher. The apparatus is easily worked, and seldom



MAIL CRANE.

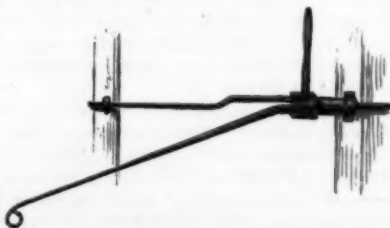
fails to do its work effectually; but great care and circumspection are necessary on the part of the operator, so that the catcher is applied at the proper time and places only, where the track is clear and nothing but a crane is in the way. It happens occasionally, on dark and stormy nights, when it is impossible to see any distance ahead, that the catcher is applied at the wrong time, and things have been caught which it was very undesirable and rather embarrassing to have anything to do with under the circumstances. Such things as telegraph-poles, lamp-posts, or switch-lights, are well enough in their way, if left to perform their proper functions; but rather awkward when in the way of a catcher. One of two things inevitably follows. Either the misplaced apparatus, with appurtenances, including door, windows, and sometimes a large portion of the solid wood-work of the car, is torn away, or some incongruous and occasionally injurious article will suddenly enter the car through the windows or the panels in the door.

To prevent accidents of this kind, the engineer always blows his whistle in a peculiar manner when a catch station is approached, and upon this signal the catcher is let down, and, if everything is all right and properly timed, a mail pouch is the result. The bag with the mail for the station is simply thrown off the car through the open door while the train is passing—an operation that is to all appearances simple enough, but really, like that of catching, requires considerable skill, and not a little physical force. The pouch must be thrown just at the proper time, for a few moments too soon or too late will leave

it on the ground a considerable distance from the station. It must be thrown with considerable force against the wind caused by the moving of the train, as, otherwise, it will be blown under the cars and its contents ruined by the trucks passing over it.

On a cold, stormy winter night, it is no joke to serve these small way stations with the night-mail. At every opening of the door,—and the catcher cannot be operated, nor can the way mail be delivered, unless the door is wide open,—an avalanche of snow and icy sleet comes rushing in, half smothered in the steam and smoke from the locomotive. The force of the wind, with the train running from fifty to sixty miles an hour, is terrific, and one must have a good and firm grip at the iron bars at the side of the door when leaning out to see how far we are from the station. Presently there comes a short, hoarse shriek from the locomotive, the door is thrown all the way back, the catcher quickly let down—thud!—a slight shock; and bang goes the door again, shutting out the wind and snow, while the pouch that has just come aboard is being rapidly unlocked, emptied, and its contents properly examined and distributed. By the time this is done, the bag which we threw off with the made-up mail for the station just passed, has been picked up by the messenger in waiting, and is in all probability on its way to the country post-office.

This American arrangement of “catching” and “delivery,” notwithstanding its drawbacks, is an improvement upon the system used in England. The British postal cars have a net attached to the side, which, by some complicated mechanism, is supposed to open out and catch the mail-bags at stations where the train does not stop. While the American arrangement sometimes catches too much, but is rarely known to fail to catch something, the English mechanism, it is said, misses the mark quite as frequently as it hits it. For this reason it is being gradually abandoned, and other systems, more or less



MAIL-BAG CATCHER.

like our own, are being introduced. In India, the American system has been exactly copied; and it is now being introduced on the Australian railroads.

Arrived at Cleveland, at seven o'clock in the evening, we stop twenty minutes for supper. Hastily they throw on their coats, and before the train has come to a full stop, two of the clerks (one being left in charge of the car) may be seen at the bar of the restaurant, devouring cold ham, sausage and pie, at a terrific rate. Soon the gong sounds again, the bell rings, the conductor shouts "all aboard!" and off we are once more, postal car and all, the clerks busy at work arranging and opening the dozen or more pouches taken on board at this point.

It is almost midnight when we reach Toledo. Here the three postal clerks with whom we made the journey all the way from the Buffalo post-office bid us good-bye, and another "set" come aboard to take their places. Receipts are exchanged, a few explanatory remarks made, and our new friends begin work immediately where our fellow-travelers left it.

And so all through the night work continues. Every once in a while a mail-pouch is caught and another thrown off; the stop-pages are few and far between, and we tear along through dark pine forests where the snow and hoar-frost glitter on the branches, illuminated by showers of sparks from the engine. The clerks courteously offer us the use of their berths; and while they are busy at their work, we retire and try to sleep; but are all the time conscious of the peculiarities of our situation, and recognize the thud and jar every time we make a catch.

As morning dawns we approach Chicago, the terminus of our route. The clerks pack up their "traps," and prepare to deliver the last of their way-mail, and the pouches, bags, and boxes which have been stowed away in the "through" room in the rear of the car. A few minutes after seven o'clock we are at Englewood, the last station before Chicago, and precisely at a quarter of nine we enter the depot in the latter city, and our journey in a railway post-office is at an end.

The importance and value to the public of the railway postal service has not, until quite recently, been generally understood. A merchant in New York receives his letters from Chicago, mailed in that city only thirty hours before they are put into his hands, quite as a matter of course, without bothering his head about thinking how this is accomplished. But for the railway postal service, it would be an



CATCHING THE MAIL-POUCH.

utter impossibility; and the same letter, which now requires thirty hours only, would take perhaps forty hours in transmission. Every year, almost every month, adds to the number of lines upon which railway postal service is placed, and the corps of clerks employed in this most important branch of the postal service of the country is rapidly augmenting. The service is under the direct supervision and control of the "General Superintendent of the Railway Mail Service" in Washington,—an office most ably filled by Mr. Geo. S. Bangs, of Illinois. To Mr. Bangs is due the rapid and successful development of the service, and he is indefatigable in his endeavors to extend its benefits to all sections of the country.

In his last official report (dated November 15th, 1872), the Postmaster-General says regarding the railway post-office service:

"Railway post-offices continue to receive the special attention of the Department, and the improvement effected during the past year has been most gratifying. Since the 30th of June, 1871, this branch of the service has been largely extended. Eight new lines have been established, with an aggregate length of 2,909 miles. The daily service has been increased 6,094 miles, and the annual service 2,224,310 miles, making necessary the appointment of 136 additional postal clerks of various grades."

From an interesting table appended to the report above quoted, it appears that the

amount of railroad mail service, in successive years, from the commencement of such service (the railway mail service, be it remembered, not the *post-office* service) in 1836, to June 30th, 1872, has increased at an average rate of 1,626 $\frac{1}{2}$ miles per annum. The report for the first year, 1836, shows the annual transportation on railroad and steamboat routes combined. The length of railroad routes was first reported to be 974 miles at the close of the year ended June 30, 1837. The length in 1872, as has been already stated, was 57,911 miles—an increase of 56,937 miles in thirty-five years. The largest increase in length for any one year was for 1872, being 8,077 miles. The first report of the annual cost of railroad routes, uncombined with steamboat routes, was \$531,752, on the 4th of November, 1845. The cost in 1872 was \$6,502,771; showing an increase of \$5,971,019, in twenty-seven years, and an average increase of over \$221,148 per annum. The largest increase in cost for any one year was for 1872, being \$777,792.

Although one of the branches of the Government in which every man, woman, and child in the United States is most directly interested, the Railway Post-Office Service, as it is officially called, has matured its plans and brought them into practical operation with so little ostentation, that many of those who derive the greatest advantage from the system were scarcely aware of its existence previous to the recent controversy between the Post-Office Department at Washington, and some of the leading railroad corporations of the country.

This arose from a demand by the railroads running postal cars on their lines for higher compensation for performing that service than they had been paid. The rate of compensation is limited by law to the sum of three hundred and seventy-five dollars per mile per year, and this rate is only paid to the great trunk lines performing "double" service, or running postal cars on two daily trips each way. In a letter addressed to the Postmaster General on the 27th of January last, the agents for some of the leading lines, among which the Erie Railroad, Philadelphia, Wilmington and Baltimore, N. Y. and New Haven, the Connecticut River, Hudson River and N. Y. Central, and Pennsylvania Railroad requested compensation for the Railway Post-office service over their lines at the rate of forty cents per mile *run*, for an eight-wheel postal car, and proportionate payment for less space transported over the roads in this service. In case of non-compliance with

this demand—which would, it is calculated, draw the sum of thirty-seven million dollars from the Treasury annually, in payment for the railway post-office service, *exclusive* of all the other expenses of the Post-Office Department (amounting to about thirty-one millions annually)—they threatened to withdraw the postal cars from their routes on the first day of last April. In justification of this demand, they contended that the rate of compensation for postal-car service is less than what is paid for second-class freight. The Postmaster General has, in his annual reports, repeatedly endeavored to call the attention of Congress to this matter of compensation for running postal cars, with their complement of route agents, clerks, etc.; believing that the present rate of payment is inadequate; and last year a law was passed, authorizing that officer to allow any railroad company with whom "he may contract for the carrying of the United States mail, and who furnish railway post-office cars for the transportation of the mail, such additional compensation beyond that now allowed by law as he may think fit, not exceeding, however, fifty per centum of the said rates." In order to carry this law into effect, an appropriation of about one million and a half would be required; but this Congress failed to make, and thus, of course, the law remained inoperative. Again having its attention called to the matter, and the necessity of some action, Congress, at its last session, passed a law making provision for a *pro rata* increase of compensation for the transportation of mails in postal cars, of from fifty to two hundred dollars per mile, per annum, according to the quantity of mail matter carried and the frequency of transportation, and appropriating five hundred thousand dollars for that purpose. By the passage of this act, the law authorizing the Postmaster General to increase the compensation of certain routes according to his own judgment was repealed, and the above act, which was approved March 3, 1873, is the only one under which payment can at present be made to the railway companies for performing this service.

There being no appropriation to pay for the enormous demand made by the railroad corporations on January 27th, the Postmaster General, even if he had been disposed to do so, could not have complied with their request, and the result would have been the withdrawal of the postal cars. It would have been necessarily productive of the most serious results to the entire business commu-

nity of the United States, if they had carried their threat into execution. Mr. George S. Bangs was sent to New York with instructions to endeavor to effect a compromise, temporarily at least, so as to avoid the pending calamity, for the withdrawal of the postal cars from all the leading railroads of the country would have been nothing less. At the same time, the matter was referred to the then newly organized "Select Committee of the Senate on Transportation Routes to the Seaboard" (Hon. Wm. Windom, of Minn., chairman), with instructions to consider and report upon "the nature and extent of the obligations subsisting between the railroad companies and the postal service of the country; and whether any, and what, legislation is necessary to guard the postal service against interruption or injury by hostile action on the part of said railroad companies, or any of them."

Meanwhile, Mr. Bangs had succeeded in effecting an arrangement with the Erie Company, which agreed to suspend action in the matter, and continue running the postal cars under previous conditions, until a settlement could be reached through the intervention of the Senate Committee above referred to.

This breach had the effect of making all the companies agree to continue the service on the same terms and conditions as heretofore, until the matter could be settled by the Senate "Committee on Transportation," as it is now usually called. It was not, however, the prospect that this committee would accede to and report favorably upon their demands, in their present form, which caused the other companies to suspend the threatened withdrawal of the service, although, in the letter which they subsequently addressed to the Postmaster General, it would appear so. But under the law, as it now stands, that officer

has it in his power to contract, if circumstances such as the threatened "strike" should render it necessary, with any *one* of the great trunk lines, giving to it the exclusive transportation of the mails at a compensation equal to that now paid to all the lines combined for performing that service. The Erie company, appreciating this fact, withdrew from the coalition. It is, however, but due to state that, from the first, President Watson, of the Erie Company, seemed disposed to take a view of this matter rather different from that taken by the representatives of the other railroad companies; and, in conversation with Mr. Bangs, repeatedly said that, in his opinion, the roads running postal cars derived considerable benefit therefrom, indirectly, through the increase in traffic along their lines occasioned and encouraged by the frequency and promptness of the mail service in consequence of the postal cars. "The railroads as public servants," said this gentleman, "and in view of the franchises which have been granted them by the people, are indebted to the public to such an extent, certainly, that the withdrawal of the postal-facilities, and consequent confusion and damage, would be little less than a crime." He also expressed himself perfectly willing to run postal-cars on the Erie route without any change in the old arrangement, until the question at issue should be finally decided by the Committee on Transportation. Rather than allow the Erie to enjoy the valuable privilege of monopolizing the carrying of the mails, the companies all withdrew their objections temporarily, awaiting action by the Committee on Transportation, before whom they, as well as the Government, will have a full and fair hearing,—and thus the matter rests at present.

CORNELL UNIVERSITY.

CONSPICUOUS among our many institutions of learning is Cornell University. This prominence is the result of a combination of causes, among which may be mentioned the peculiar nature and the richness,—actual and prospective,—of its endowments, the liberality of the principles upon which it has been planned and administered, the equality which it seeks to establish among the several

departments of instruction, and the remarkable growth in numbers of its faculty and its body of students. Inasmuch, however, as the University is not situated upon any of the great highways of travel, the number of its visitors is still comparatively small. The great mass of tourists of New York State itself are acquainted with the University merely by reputation. This ignorance can only be



THE CORNELL UNIVERSITY BUILDINGS, ITHACA, NEW YORK.

regretted, for both the University and its surroundings present much of interest to visitors of every class.

Ithaca, a town of about 10,000 inhabitants, is situated three-fourths of a mile from the upper or southern end of Cayuga Lake.

The University buildings are located on East Hill, outside the limits of the town, and half a mile north from the town-hall. Standing as they do on the very brow of the hill, they are conspicuous in every direction. The usual way of approaching them is to ascend the hill by one of the streets running directly east, and then, having reached the first ridge, to turn to the north. At this turn stands the Cascadilla, a massive stone building, one hundred and ninety-five feet by one hundred, and four stories in height. It was planned originally for a water-cure establishment, but was leased and is now used, and in part owned, by the University. It contains apartments for professors and their families, dormitories for students, a large reception-room, and the general University offices. The grounds have been terraced and sodded: the western windows afford a handsome view of the town. The road winds around the building, and then up the Cascadilla ravine for a few hundred feet to the east, and then turns to the north, crossing the ravine by a frail-looking bridge suspended forty or fifty feet above the bed. From this bridge there is, to the left, a charming glimpse down the brook as it tumbles in a succession of sparkling cascades over its rocky bed, hurrying to join the lake below. Nor is the view to the right less picturesque, as the brook quietly

emerges from the dark woods of hemlock. The road continues northward, winding through a small grove, until it reaches the summit of the ridge, and the lake and the University buildings proper come into view. The distance from the Cascadilla to the University is somewhat less than half a mile. The buildings are, at present, five in number. Three of them stand in a row on the edge of the hill and parallel with the line of the lake and the valley. These three are the South and the North Universities and, between the two, the McGraw building. A little farther to the north, and at right angles to the main line, is the Sibley building. In the middle of the inclosure, and opposite the McGraw building, is the laboratory. This is of wood. The others are of stone. The two Universities are each one hundred and sixty-five feet by fifty, four stories high, and are used partly for dormitories and partly for recitation-rooms. The Sibley building is eighty feet by forty. The McGraw building, at present the finest of all, is two hundred feet by sixty, and is surmounted by a clock-tower one hundred and twenty feet high. This is almost completed inside, and will give ample accommodation for the rapidly growing library and the various collections in natural science, besides many large lecture-rooms. The Sibley building is occupied by the department of the Mechanic Arts. It contains the engine-room, printing-press, machine-shop, draughting-rooms, and also the botanical laboratory. Besides these two recent gifts, the Sibley and McGraw buildings, the University is to be the recipient of another and

still larger donation. Henry W. Sage, Esq., of Brooklyn, has given the sum of \$250,000 for the erection of a dormitory for female students, and the equipment of a so-called female department. This dormitory is to stand somewhat detached from the other buildings, in the lot immediately south of the present grounds, and will be, when completed, one of the handsomest structures in the country. On the little knoll to the east of the university lot are the neat cottage residences of Professors Law and Fiske, and the President's house, a handsome brick building, the gift of Mr. White to the University.

From almost any point in the University grounds the view is fine. But the choicest spot, perhaps, is the little knoll in front of the western side of the McGraw building. Standing here on a natural terrace, the spectator may let his eye sweep with unobstructed vision over a panorama of uncommon loveliness. At his feet, half hidden in foliage, nestles the town, four hundred feet below. To the right, the smooth waters of the lake stretch away for miles. Directly across the valley, and spreading to right and left, is the broad slope of West Hill, dotted with farm-houses and intersected with roads. To the far left, and gradually losing itself among the distant hills, is the Newfield valley with its graceful contours, a vista of which the eye seems never to grow weary. It is difficult to decide whether June, with its fresh, dark foliage, or October, with its multitudinous tints, offers the more attractions. Even in January, when field and wood and lake are alike covered with their mantle of snow or ice, the view is strikingly beautiful. No other college grounds, excepting, perhaps, those of the University of California at Oakland, can rival Cornell in its scenery. The eye may range at least forty miles from

north to south over a broad zone of thrift, and quiet, diversified beauty.

Mention has been made of the Cascadilla ravine. A few rods to the north of the University grounds is the no less beautiful and much grander gorge of Fall Creek. From the mill-dam to the base of the lower fall, a distance of a mile or a mile and a half, the water descends four hundred and fifty feet, in a succession of falls and rapids. Three years ago a path was made along the northern bank, alternately following the side of the stream or zigzagging along the tops of the overhanging cliffs. The distinct falls are five in number; the smallest is thirty feet in height, the highest, and last, over one hundred. There is always a fair volume of water in the creek; but in the spring, after a heavy freshet, the ravine thunders with the rush of the swollen torrent, and at such times it is one of the special sights of Ithaca to stand on the bridge of the lake road, at the base of the lower fall, and watch the huge masses of water and spray plunging down in angry bounds.

But Ithaca is not rich in its immediate surroundings alone. It can also point with satisfaction to its numerous charming drives and walks. The valley of Six-Mile-Run, east of the town, is well worthy of exploration. Three miles up the Newfield valley, on the eastern side, is the romantic ravine of Butter-milk creek. Five miles farther, on the other side, is Enfield ravine, a secluded gorge that offers many fine views. In the opposite direction, about twelve miles from town, near the western bank of the lake, is the cascade of Tuyghanic, or Taughannock, as it is variously spelled. Here everything but the volume of water is on a grand scale. The sides of the ravine, which is almost if not quite half a mile wide at the top, are formed by two slate cliffs, three hundred and fifty feet high, and coming together at the upper end of the ravine so as to form a rocky amphitheater. At this upper end the wall is fissured for some distance from the top by a narrow gorge, from which issues a small stream that makes a sheer descent of over two hundred feet to the bed of the main ravine below. Standing on the outlook by the side of the road in front of the hotel, the visitor can take in at a glance the huge gulf below and the tiny, slow-dropping cascade. The northern bank itself is also interesting aside from its view. It has, in consequence of the width of the ravine, a very fine southern exposure, and is completely sheltered from the cold winds. For a hundred or a hundred and fifty feet up from the base,



THE CASCADILLA.

the *débris* of the disintegrated slate rocks has accumulated, and this soil, in itself fertile and being thus favored in warmth and in moisture (from the spray of the fall), has become a great natural hot-bed, as it were, for the most luxuriant vegetation. The range of species is extensive, while the abundance of plants is extraordinary. There is probably not another spot of the size in this country, perhaps not even in the tropics, that surpasses it in this respect.

Ithaca being shut in by hills, it follows that the roads leading out of town must be more or less hilly. This drawback to locomotion, however, is more than made good by the variety of the scenery. The country is well cultivated and fertile, the roads no worse than the American average, and the views shifting and ever pleasing. One cannot go amiss in any direction. The most charming drive is perhaps the one up the Newfield valley. Some of the cross-roads leading down the eastern bank of the lake afford romantic but rather hazardous passages. In short, the traveler who has a week or more to spare may make Ithaca the starting-point for a number of excursions. The country is so beautifully *accidenté*, to use a French term for which our language has no equivalent, that he may be always sure of finding some view at once novel and picturesque.

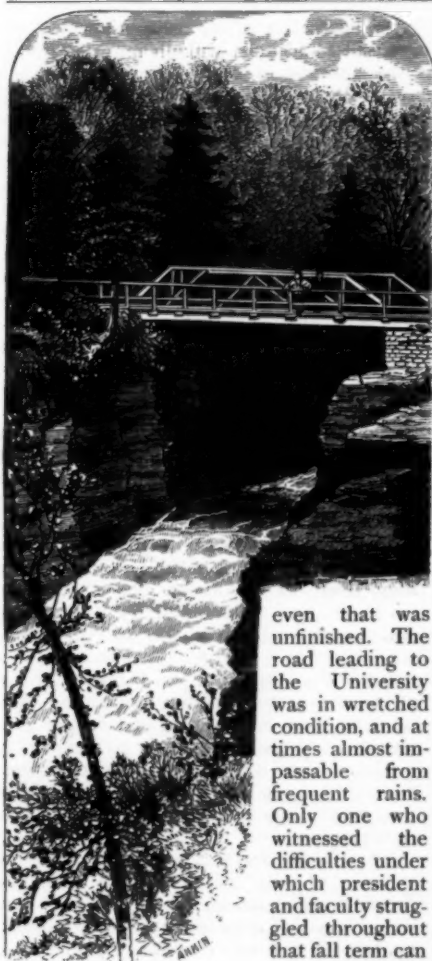
To the naturalist, also, the neighborhood is one full of interest. The entire bed and valley of the lake is an immense excavation, or gully, made in the Devonian strata, which are handsomely exposed at many places along the banks. North of Cayuga Bridge the formation is Silurian. Proceeding from the bridge southward to Ithaca, we enter the Devonian. At Union Springs we find the Oriskany limestone, rich in fossils. Between Union Springs and Aurora there is a bed of corniferous limestone. From near Aurora to within a few miles of Ithaca we have the Hamilton formation, extremely rich in trilobites, spirifers, etc. Before reaching Ithaca there is a strip of Portage, while in the immediate neighborhood of the town the entire side of the valley, from top to bottom, is composed of Chemung rocks abounding in fossils. These several strata from Union Springs to Ithaca have a slight dip to the south.

A few words upon the botanical features of the neighborhood of Ithaca. By reason of the diversity of soil and temperature, and peculiarities of exposure, the flora is unusually rich and full. Towards the lake there are many varieties of marsh plants,

among them the White and Yellow Water-Crowfoot and the Yellow Lady's Slipper. The glens contain several varieties of orchids, and are extremely rich in ferns and mosses. There have also been discovered, quite recently, two species of plants very rare in this latitude: the *Pinguicula vulgaris* and the *Primula mistassinica*. The woods present an equal proportion of deciduous and ever-green trees: white pines, hemlocks, maples, oaks, etc. Among rarer ones are the *Magnolia acuminata*, and the *Liriodendron tulipifera*. Trailing arbutus is found in many places in great profusion. The wake-robin, or nodding trillium, is found in Taughan-nock Ravine. The marsh lands between the town and the lake contain a few uncommonly large sycamores, and the willows on the flats and along the lower water-courses are numerous and flourishing.

Cornell University has been the subject of extravagant praise and no less extravagant censure. Both praise and censure have been hurtful, and both have arisen from a misconception of the aim and limits of the institution. It would not be possible to give, in a brief sketch like the present, the details of the plan of studies and the general administration. The reader who may wish to inform himself thoroughly in the minutiae of the University has only to consult the annual catalogue, or register, where everything is stated with exactness and fullness. The present article will attempt to give nothing beyond broad outlines, and such features of interest as cannot well be presented in official publications.

The University was born in troublous times. Its germ lay in the act of Congress, passed in the darkest days of the war, July, 1862, whereby public lands were apportioned among the several States for the purpose of encouraging instruction in agriculture, the mechanic arts, and military tactics. The share of the State of New York amounted, in scrip, to 990,000 acres. After much delay and not a little counter-legislation (for the details of which the reader may consult the Laws Relating to the University, printed by order of the Trustees), this scrip and the proffered endowment of \$500,000 from Mr. Cornell were consolidated, and the University was incorporated in 1865. It was opened in October, 1868, with a faculty of sixteen professors and two assistants, and an entering class of over three hundred. The faculty were strangers to the students, and almost strangers to one another. There was but one building available for recitations, and



CASCADILLA FALLS.

even that was unfinished. The road leading to the University was in wretched condition, and at times almost impassable from frequent rains. Only one who witnessed the difficulties under which president and faculty struggled throughout that fall term can realize the burden of them or ap-

preciate the smoothness and regularity of the present organization. Not before the Christmas vacation came the first breathing-spell, when the faculty could look around them and see that the University really had consistency and shape. Since that time progress has been uniform and rapid. The number of full professors has grown to twenty; of assistant professors, eleven; instructors, three; non-resident professors, eight; besides a number of short-course lecturers on special topics. In round numbers, the entire educational staff may be estimated at fifty. The number of students has increased to five hundred and

ninety-five. In place of one over-crowded building there are now five, while the ground for the sixth, the Sage building, has already been broken.

The funds, also, have been greatly augmented. The original endowment was composed of the \$500,000 from Mr. Cornell and the scrip for nearly a million of acres of western lands. To his original gift Mr. Cornell has added the land on which the buildings are erected, a large farm for the agricultural department, apparatus, and other donations aggregating over one hundred thousand dollars additional. Of the scrip, four hundred thousand acres were sold as scrip for about a dollar an acre, and the proceeds added to the other cash endowments. The scrip for the remaining five hundred and forty thousand acres was carefully located, chiefly in Wisconsin. Some of these lands have recently been sold at a handsome profit; upwards of two hundred thousand acres at four and at five dollars an acre. The income from vested funds has thus been raised from \$60,000 to about \$140,000, while there is still a residue of 270,000 acres of choice Western lands held for future sale.

The library is growing rapidly, and now contains (including the lately purchased Sparks' collection) 35,000 volumes.

The instruction is subdivided into three general courses: in Science, in Literature, and in Arts. The course in Arts corresponds, in the main, to the usual college curriculum, and candidates for admission to it are examined much as they would be at Harvard or Yale. Candidates for the course in Science are examined only in the so-called English studies, *i. e.*, in English grammar, geography, and algebra through quadratics. The course consists of mathematics, French and German, the natural sciences, history, English literature, etc. The course in Literature lies between the other two. The chief difference between it and the course in arts consists in the substitution of modern languages for Greek. Besides these general courses, there are special courses in Agriculture, in the Mechanic Arts, and in Engineering. In addition to the students in these general and special courses, there are the so-called elective students. These do not follow any of the routines of study, but select for themselves from term to term or year to year. Some of them, indeed, confine themselves to one study, chemistry, for instance, or geology. These special students are not entitled to any degree. The faculty exercises over them a supervisory power, seeing that the studies which they



THE SIBLEY COLLEGE.

undertake are pursued faithfully and regularly.

All candidates for degrees have to attend the lectures on General Agriculture, and every student, unless specially exempted, must take part in the military drill. It is at this point that the peculiar features of the University manifest themselves. It should be borne in mind that the act of Congress contemplated the foundation of colleges for the promotion of "agriculture and the mechanic arts, including military tactics, and without excluding other scientific and classical studies." The authorities of the University have endeavored, from the start, to construe these terms liberally and yet justly. Numbers play no part in instruction in agriculture or the mechanic arts. Hence no student is forced to receive instruction in those studies. Elective students may omit them altogether. At the same time it has not been deemed proper to *graduate* young men from a college in which agriculture and the mechanic arts play so important a part without exacting of them a knowledge of the general or the fundamental principles of the two branches. It may be stated here, in parenthesis, that the study of physics is prescribed in all the courses. In this way the University has endeavored to reconcile the spirit of the Congressional endowment, which is special, with the spirit of the Cornell endowment, which aims at the utmost freedom of study. Instruction in military tactics, however, must be placed on a different footing. Here numbers are an essential element in the instruction, and hence attendance upon drill has been made compulsory upon all. Exemptions, however, are granted, chiefly on the grounds of physical inability, aversion by reason of religious belief, and the necessity of labor for support.

Another feature of the institution which has been sadly and even willfully misunderstood, is the absence of compulsory religious instruction and exercises. Many religious journals have found herein a justification for open or covert attacks of various kinds. Such hostility, it may be said once for all, is both unsound in theory and uncalled-for in point of fact. The university was expressly founded as a non-denominational institution. By the terms of the charter, it is open, both as to its professors and its students, to men of every shade of belief. Jews, Catholics, and Protestants are alike entitled to its privileges. Teachers and students come from all the leading sects. The chair of geology was originally offered to a Roman Catholic. Only recently the trustees offered to create a chair of Hebrew literature, to be occupied by a Hebrew, provided the valuable library of Müller, in Amsterdam, were presented to the University. The President is an Episcopalian; the Vice-President, a Unitarian. In several instances students have objected to being examined on Saturday, on the ground of their being Jews. How, under such circumstances, to arrange an acceptable course of instruction in religious matters, or even to enforce attendance at religious exercises, is a problem the solution of which may safely be left to the enemies of free education. On the other hand, as a matter of fact, the general tone of the University is remarkably healthy. There is some dissipation, of course. Never yet were six hundred young men brought together without their giving cause for some discipline. Individual cases of dereliction occur from time to time, but the instances of what may be called collective disorders are extremely rare. The intolerable nuisances of horn-blowing, window-breaking, barring-out, and the like, which trouble the peace of so many other colleges, are altogether unknown at Ithaca. Slight passing jars aside, the relations between student and professor are easy and pleasant. The students are put upon their honor, and their movements are literally unwatched. The chief inducement to perverse conduct being thus taken away, the result is that the young men attend to their own affairs, and leave the professors to theirs. Those who are predisposed to vice gratify their propensities as they would at any other college. Those who are in the habit of attending religious services at home, continue it at the University, and enjoy worship none the less for its being voluntary.

Another University feature which has been

much misrepresented is the so-called labor department. Strictly speaking, there is no such department. A number of students, however, have been employed in various ways by the University, and have been paid at the usual rates. The delusion was widely spread at one time, that young men without skill could attend the University, and earn their support, or even more. The only feature of an eleemosynary nature is the provision made in the charter, that the University shall educate, free of expense, one student from each Assembly district in the State. This has been construed to mean one student each year, so that the University is liable to have at any one time about five hundred non-paying students. These free scholarships, however, are not yet all filled. The tuition charge for those who do pay is fifty dollars a year. The true statement is briefly this: The University does not engage itself to employ any one. If there is work to be done, and a student able to do it offers himself, he will be employed, and his services paid what they are worth. As a rule, only such students as were skilled hands have succeeded in covering their expenses, and even with them the tax on their time and energy has been severe. The University is not a charitable, but an educational institution; it was founded with a view to teaching, not to paying young men. All that it can attempt consistently is to dignify labor, and to facilitate honest endeavors at earning an education. But it cannot overlook the end in the means. In the words of the University register, "the University authorities cannot recommend any young man to come relying entirely upon unskilled labor for support. Some few have that peculiar combination of mental and physical strength required thus to entirely support themselves; the great majority have not."

Hitherto the self-supporting students have been chiefly printers. The University has for some time past done all its own printing, besides filling several outside orders.

The students afford the usual variety of mind and character. In one respect, however, they differ decidedly from the or-



CASCADILLA WALK.

dinary American collegian. They come mainly from the small towns and villages in the interior of New York and other States, and belong to the rural or semi-rural class. As Cornell itself is still in its infancy, they are not sent to it because their fathers or their grandfathers studied there, but they go to it of their own accord, because it meets their wants. Perhaps they realize more clearly than do the students of other colleges the object of their student-life, and struggle more faithfully in its attainment. They are regular in attendance, and quiet in deportment. They succeed well in scientific and mathematical studies, but are deficient in literary culture. They compensate for the deficiency by their general sober-mindedness and good sense. They will not compare in oratory and composition with the students of New England colleges, but they will average better in solid attainments, and will probably wear



THE PRINTING OFFICE—BISLEY BUILDING.

as well in life. In one particular, at least, they have the merit of upsetting the calculations of the authorities not merely of their own college, but of nearly all the others. It has ever been asserted confidently that dormitories were an essential feature of the American system, necessary to the discipline and the protection of the student. Ithaca never having been, prior to 1868, the seat of any institution of learning higher than a town-academy, it was expected, of course, that the reasons which made dormitories a necessity at Yale and Harvard would apply with increased force to Cornell. It was said and believed that the students never would and never could be accommodated in town. Accordingly the Cascadilla and the two University buildings were planned with a view to lodging two or three hundred students. During the fall term of 1868, and the spring term of 1869, the students did reside mainly in those buildings. But ever since the summer of 1869, a marked preference has been shown by the students for rooming in town, until at present three-fourths are thus living by themselves in knots of three and four. The inhabitants of the town, finding by increased contact, that students were neither Turks nor Indians, but good Christians like themselves, and able to pay for what they wished, have built new houses, repaired and enlarged old ones, until now the supply is a trifle in excess of the demand, and landlords are full as willing to accommodate students as students are to be accommodated. The discipline of the University has only gained by the change. The students are better satisfied with their board and lodgings; they seldom congregate in large groups; and they are not tempted to make any public disturbance, which would annoy only themselves and private citizens, and which would, if serious, result in their summary ejection.

Such is a sketch,—a brief and imperfect one, it is admitted,—of the University, in itself and in its surroundings. It has its defects,



EZRA CORNELL'S RESIDENCE.

which will suggest themselves to every one familiar with the processes of education. The standard of admission to the scientific course, the popular one, is too low, and the instruction is too fragmentary. The University starts too low down in the scale and attempts to cover too much ground. Hence has arisen an institution *sui generis*, something that is neither a school of science, nor a college, nor a university, but an odd mixture of the first and second, with some suggestions of the third. The funds, large as they may appear, are not adequate to the thorough carrying-out of the programme. With all its imperfections, however, the University has done a good service to the State. It has placed all students, scientific and classical, rich and poor, on an equal footing, and it has executed its course of instruction with a minimum of discipline. It has given the opportunity of education to many who would otherwise never have been reached. It has disabused the public of many time-honored prejudices, and given new life to older institutions of learning, by rousing them to generous emulation in shaking off from study the fetters of unnecessary routine and *ex cathedra* interference.

LA BELLE DAME SANS MERCI.

I.

HIS STORY.

THIS is my lady, gracious as the air,
Breathing alike on all; her destiny
Fulfilled, if she will deign only to be,
Being so beautiful. Mark you her hair,
Twined strand on strand of intricate and rare,
And, O, most fatal woven witchery!
Her eyes are fathomless as is the sea,
Engulfing fools who for their radiance dare
To venture all upon them. There she sits,
Mysterious, silent, cruel as the grave;
And here am I,—men say of subtle wits,
Shrewdness, and poise of judgment,—yet a slave
Unto her least caprices. Know her? I?
I know her! yet for lack of her must die.

II.

HER STORY.—THE SURFACE.

"Mysterious, silent, cruel as the grave"—
That's I! *La Belle Dame sans merci*! 'Tis so
The legend runs. Now and again a slave
Will try to pluck the mystery's heart, and brave
The cruelty. He ventures much, and lo!
He loses all, and wins the luck to know
That women are but women. Then a wave
Sweeps him out seaward. He is seen no more.
Would he had chanced to thrive! He's ruined? Ay,
'Tis pity of the ruin. All the shore
Is strewn with wrecks. The breakers make reply,
"Wrecks feed us not. O that beyond the roar
And foam and jagged death their ships would sail,
And on the safer sea ride out the gale!"

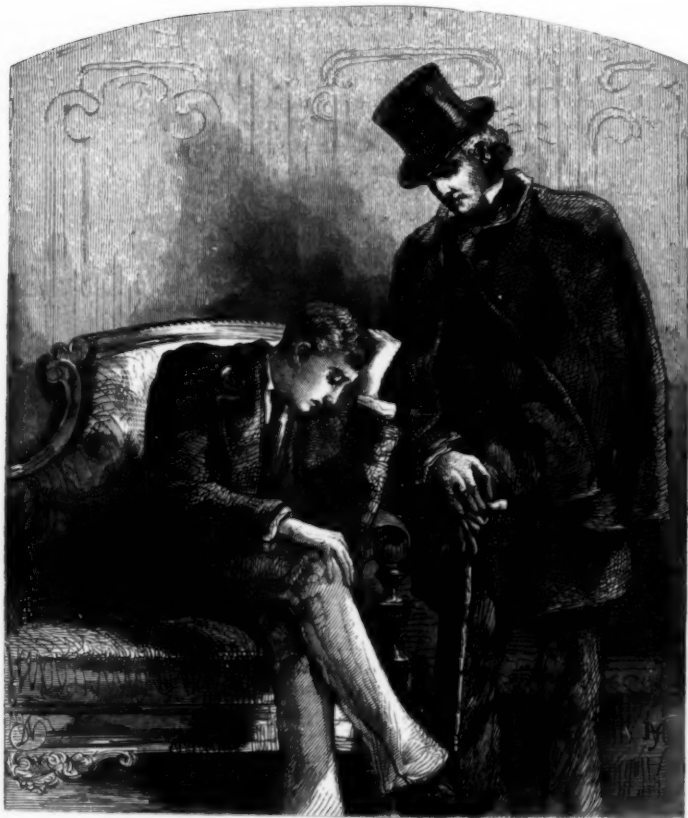
III.

HER STORY.—THE DEPTH.

I'm weary of my life. Proud hearts can ache
In unsuspected hunger. "Fair to see,
And hard and cruel." Dare they talk of me?
Hunger is ever cruel. Need doth make
The gentlest soul forget sweet mercy's sake
And tear and raven. Still with self-same plea
Come fools and sages, saying each will be
The solver of my riddle,—till they break
My heart with longing. Ah, come thou, my king,
Come thou, my hero,—and at thy dear feet
I'll crouch, thy velvet cushion, thy tame thing,
And listening for thy lightest word, entreat
To do thee lowliest service; still content
If life in love's free vassalage be spent.

ARTHUR BONNICASTLE.

BY J. G. HOLLAND.



MR. BRADFORD AND ARTHUR ON THE STEAMER.

CHAPTER XIII.

NEW YEAR'S morning dawned bright and cold. "A happy New Year to you!" shouted Livingston from his bed. The call woke me from a heavy slumber into delightful anticipations, and the realization of a great joy in living, such as comes only to youth—an exulting, superabounding sense of vitality that care and age never know.

We rose and dressed ourselves with scrupulous pains-taking, for calls. On descending to the breakfast-room, we found the young ladies quite as excited as ourselves. They had prepared a little book in which to keep a record

of the calls they expected to receive during the day, for, according to the universal custom, they were to keep open house. The carriage was to be at the disposal of my friend and myself, and we were as ambitious concerning the amount of courtesy to be shown as the young ladies were touching the amount to be received. We intended, before bedtime, to present our New Year's greetings to every lady we had met during the week.

Before we left the house, I saw what preparations had been made for the hospitable reception of visitors. Among them stood a row of wine-bottles and decanters. The view saddened me. Although I had not tasted wine

since "the special occasion," my conscience had not ceased to remind me, though with weakened sting, that I had sacrificed a conscientious scruple and broken a promise. I could in no way rid myself of the sense of having been wounded, stained, impoverished. I had ceased to be what I had been. I had engaged in no debauch, I had developed no appetite, I was not in love with my sin. I could have heartily wished that wine were out of the world. Yet I had consented to have my defenses broken into, and there had been neither time nor practical disposition to repair the breach. Not one prayer had I offered, or dared to offer, during the week. My foolish act had shut out God and extinguished the sense of his loving favor, and I had blindly rushed through my pleasures from day to day, refusing to listen to the upbraidings of that faithful monitor which He had placed within me.

At last, it was declared not too early to begin our visits. Already several young gentlemen had shown themselves at the Livingstons, and my friend and I sallied forth. The coachman, waiting at the door, and thrashing his hands to keep them warm, wished us "a happy New Year" as we appeared.

"The same to you," responded Livingston, "and there'll be another one to-night, if you serve us well to-day."

"Thankee, sir," said the coachman, smiling in anticipation of the promised fee.

The footman took the list of calls to be made that Livingston had prepared, mounted to his seat, the ladies waved their hands to us from the window, and we drove rapidly away.

"Bonnicastle, my boy," said Livingston, throwing his arm around me as we rattled up the avenue, "this is new business to you. Now don't do anything to-day that you will be sorry for. Do you know, I cannot like what has happened? You have not been brought up like the rest of us, and you're all right. Have your own way. It's nobody's business."

I knew, of course, exactly what he meant, but I do not know what devil stirred within me the spirit of resentment. To be cautioned and counseled by one who had never professed or manifested any sense of religious obligation—by one above whose moral plane I had fancied that I stood—made me half angry. I had consciously fallen, and I felt miserably enough about it, when I permitted myself to feel at all, but to be reminded of it by others vexed me to the quick, and rasped my wretched pride.

"Take care of yourself," I responded,

sharply, "and don't worry about me. I shall do as I please."

"It's the last time, old boy," said Livingston, biting his lip, which quivered with pain and mortification. "It's the last time. When I kiss a fellow and he spits in my face I never do it again. Make yourself perfectly easy on that score."

Impulsively I grasped his hand and exclaimed: "Oh! don't say that. I beg your pardon. Let's not quarrel: I was a fool and a great deal worse, to answer as I did."

"All right," said he; "but if you get into trouble, don't blame me; that's all."

At this, we drew up to a house to make our first call. It was a grand establishment. The ladies were beautifully dressed, and very cordial, for Livingston was a favorite, and any young man whom he introduced was sure of a welcome. I was flattered and excited by the attention I received, and charmed by the graceful manners of those who rendered it. House after house we visited in the same way, uniformly declining all the hospitalities of the table, on the ground that it was too early to think of eating or drinking.

At last we began to grow hungry for our lunch, and at a bountifully-loaded table accepted an invitation to eat. Several young fellows were standing around it, nibbling their sandwiches, and sipping their wine. A glass was poured and handed to me by a young lady with the toilet and manner of a princess. I took it without looking at Livingston, held it for awhile, then tasted it, for I was thirsty; then tasted again and again, until my glass was empty. I was as unused to the stimulant as a child; and when I emerged into the open air my face was aflame with its exciting poison. There was a troubled look on Livingston's face, and I could not resist the feeling that he was either angry or alarmed. My first experience was that of depression. This was partly moral, I suppose; but the sharp air soon reduced the feverish sensation about my head and eyes, and then a strange thrill of exhilaration passed through me. It was different from anything I had ever known, and I was conscious, for the first time, of the charm of alcohol.

Then came the longing to taste again. I saw that I was in no way disabled. On the contrary, I knew I had never been so buoyant in spirits, or so brilliant in conversation. My imagination was excited. Everything presented to me its comical aspects, and

there were ripples and roars of laughter wherever I went. After repeated glasses, I swallowed at one house a draught of champagne. It was the first I had ever tasted, and the cold, tingling fluid was all that was necessary to make me noisy and hilarious. I rallied Livingston on his long face, assured him that I had never seen a jolly fellow alter so rapidly as he had since morning, begged him to take something that would warm him, and began to sing.

"Now, really, you must be quiet in this house," said he, as we drew up to an old-fashioned mansion in the suburbs. "They are quiet people here, and are not used to noisy fellows."

"I'll wake 'em up," said I, "and make 'em jolly."

We entered the door. I was conscious of a singing in my ears, and a sense of confusion. The warm air of the room wrought in a few moments a change in my feelings, but I struggled against it, and tried with pitiful efforts to command myself, and to appear the sober man I was not. There was a little group around us near the windows, and at the other end of the drawing-room—somewhat in shadow, for it was nearly night—there was another. At length, a tall man rose from this latter group, and advanced toward the light. Immediately behind him a young girl, almost a woman in stature and bearing, followed. The moment I could distinguish his form and features and those of his companion, I rushed toward them, forgetful for the instant that I had lost my self-control, and embraced them both. Then I undertook to present Mr. Bradford and my friend Millie to Livingston.

It did not seem strange to me to find them in New York. What foolish things I said to Mr. Bradford and what maudlin words to Millie, I do not know. Both carried grave faces. Millie's eyes—for even through all that cloud of stupid insanity, from this far point of distance, I see them still—burned first like fire, then filled with tears.

For what passed immediately after this, I am indebted to another memory and not to my own.

After watching me and listening to me for a minute in silence, Millie darted to the side of Livingston, and, looking him fiercely in the face, exclaimed: "You are a wicked man. You ought to be ashamed to let him do it. Oh! he was so good and so sweet when he went away from Bradford, and you have spoiled him—you have spoiled him. I'll never forgive you, never!"

"Millie! my daughter!" exclaimed Mr. Bradford.

Millie threw herself upon a sofa, and burying her head in the pillow, burst into hysterical tears.

Livingston turned to Mr. Bradford and said: "I give you my word of honor, sir, that I have not drank one drop of wine to-day. I have refrained from drinking entirely for his sake, and your daughter's accusation is most unjust."

Mr. Bradford took the young man's hand cordially and said: "I believe you, and you must pardon Millie. She is terribly disappointed, and so am I. She supposed her friend had been tempted by bad companions, and, as you were with him, she at once attributed the evil influence to you."

"On the contrary," responded Livingston, "no man has tempted him at all, and no man could tempt him. None but women who prate about their sufferings from drunken husbands and brothers could have moved him from his determination. I am ashamed to tell you who attacked his scruples first. It was one who has reason enough, Heaven knows, to hate wine; but her efforts have been followed by scores of younger women to-day, who have seemed to take delight in leading him into a mad debauch."

Livingston spoke bitterly, and as he closed, Millie sprang from the sofa, and seizing his hand, kissed it, and wet it with her tears.

"Please take him home, and be kind to him," she said. "I am sure he will never do it again."

In the meantime, entirely overcome by the heat of the room, acting upon nerves which had been stimulated beyond the power of endurance, I had sunk helplessly into a chair, where I stared stupidly upon the group, unable to comprehend a word of the conversation.

Mr. Bradford took Livingston aside, and, after some words of private conversation, both approached me, and, taking me by my arms, led me from the house, and placed me in the carriage. The dusk had already descended, and I do not think that I was observed, save by one or two strangers passing upon the sidewalk. The seal of secrecy was placed upon the lips of the household by the kind offices of Mr. Bradford, and the story, so far as I know, was never told, save as it was afterward told to me, and as I have told it in these pages.

The carriage was rapidly driven homeward. The house of the Livingstons was upon a corner, so that a side entrance was

available for getting me to my room without public observation. The strong arms of Livingston and the footman bore me to my chamber, removed my clothing, and placed me in bed, where I sank at once into that heavy drunken slumber from which there is no waking except that of torture.

The morning after New Year's was as bright as that which preceded it, but it had no brightness for me. The heart which had leaped up into gladness as it greeted the New Year's dawn, was a lump of lead. The head that was as clear as the sky itself on the previous morning, was dull and heavy with a strange, throbbing pain. My mouth was dry and hot, and a languor held me in possession from which it seemed impossible to rouse myself. Then all the mad doings of the day which had witnessed my fall came back to me, and it seemed as if the shame of it all would kill me. Livingston brought me some cooling and corrective draught, on the strength of which I rose. The dizzy feeling was not entirely gone, and I reeled in a pitiful way while dressing; but cold water, a cool room, and motion, soon placed me in possession of myself.

"I can't go down to breakfast, Livingston," I said. "I have disgraced you and all the family."

"Oh! women forgive, my boy," said he, with a contemptuous shrug. "Never you mind. If they don't like their own work, let them do it better."

"But I can't face them," I said.

"Face them! Bah! it's they who are to face you. But don't trouble yourself. You'll find them as placid as a summer morning, ignoring everything. They're used to it."

He insisted, and I descended to the breakfast room. Not an allusion was made to the previous day's experiences, except as a round of unalloyed pleasure. The young ladies had received an enormous number of calls, and on the sideboard stood a row of empty decanters. There was no thought of the headaches and heart-burnings with which the city abounded, no thought of suicidal habits begun or confirmed through their agency, no thought of the drunkards they were nursing into husbands. There sat the mother in her matronly dignity, dispensing her fragrant coffee, there were the young ladies chattering over their list, and talking of this one and that one of their callers, and there was I, a confused ruin of hopes and purposes which clustered around a single central point of consciousness, and that point hot with shame and remorse.

We were to return on the afternoon boat that day, and I was not sorry. I was quite ready to turn my back on all the splendors that had so charmed me on my arrival, on all the new acquaintances I had made, and on my temptations.

Special efforts were made by Mrs. Livingston and her daughters to reinstate me in my self-respect. They were cordial in their expressions of friendship, begged that I would not forget them, invited me to visit them again and often, and loaded me with all courteous and friendly attentions. Livingston was quiet and cold through it all. He had intended to return me as good as he brought me, and had failed. He was my senior, and had entertained a genuine respect for my conscientious scruples, over which, from the first moment I had known him, he had assumed a sort of guardianship. He was high-spirited, and as I had once repelled his cautioning care, I knew I should hear no more from him.

When we arrived at the boat, I went at once into the cabin, sank into a chair, buried my face in my hands, and gave myself up to my sorrow and shame. I was glad that I should not find Henry in my room on my return. He had been gone a month when I left, for, through the necessities of self-support, he had resumed his school duties in Bradford for the winter. I thought of him in his daily work, and his nightly visits at my father's house; of the long conversations that would pass between him and those whom I loved best, about one who had proved himself unworthy of their regard; of the shameful manner in which I had betrayed the confidence of my benefactress, and the disgrace which I had brought upon myself in the eyes of Mr. Bradford and Millie. It then occurred to me for the first time that Mr. Bradford was on a New Year's visit to his daughter, whom he had previously placed in a New York school. How should I ever meet them again? How could they ever forgive me? How could I ever win their respect and confidence again? "O God! O God!" I said, in a whisper of anguish, "how can I ever come to Thee again, when I knew in my inmost heart that I was disobeying and grieving Thee?"

I was conscious at this moment that steps approached me. Then followed a light touch upon my shoulder. I looked up, and saw Mr. Bradford. I had never before seen his countenance so sad, and at the same time so severe.

"Don't reproach me," I said, lifting my

hands in deprecation, "don't reproach me: if you do, I shall die."

"Reproach you, my boy?" he said, drawing a chair to my side while his lips quivered with sympathy, "there would be no need of it if I were disposed to do so. Reproach for error between erring mortals is not becoming."

"Do you suppose you can ever forgive me and trust me again?" I asked.

"I forgive you and trust you now. I give you credit for common-sense. You have proved, in your own experience, the truth of all I have told you, and I do not believe that you need to learn anything further, except that one mistake and misstep like yours need not ruin a life."

"Do you really think," said I, eagerly grasping his arm, "that I can ever be again what I have been?"

"Never again," he replied, sadly shaking his head. "The bloom is gone from the fruit, but if you hate your folly with a hatred which will forever banish it from your life, the fruit is uninjured."

"And are they to know all this in Bradford?" I asked.

"Never from me," he replied.

"You are too kind to me," I said. "You have always been kind."

"I don't know. I have intended to be kind, but if you are ruined through the influence of Mrs. Sanderson's money I shall curse the day on which I suggested the thought that brought you under her patronage."

"Will you accept a pledge from me," I said eagerly, "in regard to the future?"

"No indeed, Arthur. No pledge coming from you to-day, while you are half beside yourself with shame and sorrow, would have the value of a straw. A promise can never redeem a man who loses himself through lack of strength and principle. A man who cannot be controlled by God's Word certainly cannot be controlled by his own. It will take weeks for you to arrive at a point where you can form a resolution that will be of the slightest value, and, when you reach that point, no resolution will be needed. Some influence has changed your views of life and your objects. You have in some way been shaken at your foundations. When these become sound again, you will be restored to yourself, and not until then. You fancied that the religious influences and experiences which we both remember had done much to strengthen you, but in truth they did nothing. They interrupted, and, for the time, ruined the processes of a religious education. You fancied

that in a day you had built what it takes a life time to build, and you were, owing to the reactions of that great excitement, and to the confusion into which your thoughts and feelings were thrown, weaker to resist temptation than when you returned from the Bird's Nest. I saw it all then, just as plainly as I see it now. I have discounted all this experience of yours—not precisely this, but something like it. I knew you would be tempted, and that into the joints of a harness too loosely knit and fastened some arrow would find its way."

"What am I to do? What can I do?" I said piteously.

"Become a child again," he responded. "Go back to the simple faith and the simple obedience which you learned of your father. Put away your pride and your love of that which enervates and emasculates you, and try with God's help to grow into a true man. I have had so many weaknesses and faults of my own to look after, that I have never had the heart to undertake the instruction of others; but I feel a degree of responsibility for you, and I know it is in you to become a man who will bring joy to your father and pride to me."

"Oh! do believe me, Mr. Bradford, do," I said, "when I tell you that I will try to become the man you desire me to be."

"I believe you," he responded. "I have no doubt that you will try, in a weaker or stronger way and more or less persistently, to restore yourself to your old footing. And now, as you have forced a promise upon me, which I did not wish you to make, you must accept one from me. I have taken you into my heart. I took you into its warmest place when, years ago, on our first acquaintance, you told me that you loved me. And now I promise you that if I see that you cannot be what you ought to be while retaining your present prospects of wealth, I will put you to such a test as will prove whether you have the manhood in you that I have given you the credit for, and whether you are worth saving to yourself and your friends."

His last words wounded me. Nay, they did more—they kindled my anger. Though grievously humiliated, my pride was not dead. I questioned in my heart his right to speak so strongly to me, and to declare his purpose to thrust himself into my life in any contingency, but I covered my feelings, and even thanked him in a feeble way for his frankness. Then I inquired about Henry, and learned in what high respect he was held in Bradford, how much my father and all his acquaintances were delighted in him, and

how prosperously his affairs were going on. Even in his self-respectful poverty, I envied him—a poverty through which he had manifested such sterling manhood as to win the hearts of all who came in contact with him.

"I shall miss him more than I can tell you," I said, "when I get back to my lonely room. No one can take his place, and I need him now more than I ever did before."

"It is as well for you to be alone," said Mr. Bradford, "if you are in earnest. There are some things in life that can only be wrought out between a man and his God, and you have just that thing in hand."

Our conversation was long, and touched many topics. Mr. Bradford shook my hand heartily as we parted at the wharf, and Livingston and I were soon in a carriage, whirling towards the town. I entered my silent room with a sick and discouraged feeling, with a sad presentiment of the struggle which its walls would witness during the long winter months before me, and with a terrible sense of the change through which I had passed during the brief week of my absence.

And here, lest my reader be afflicted with useless anticipations of pain, I record the fact that wine never tempted me again. One bite of the viper had sufficed. I had trampled upon my conscience, and even that had changed to a viper beneath my feet, and struck its fangs deep into the recoiling flesh. From that day forward I forswore the indulgence of the cup. While in college it was comparatively easy to do this, for my habit was known, and, as no one but Livingston knew of my fall, it was respected. I was rallied by some of the fellows on my sleepy eyes and haggard looks, but none of them imagined the cause, and the storm that had threatened to engulf me blew over, and the waves around me grew calm again,—the waves around me, but not the waves within.

For a whole week after I returned, I was in constant and almost unendurable torture. The fear of discovery took possession of me. What if the men who were passing at the time Mr. Bradford and Livingston lifted me into the carriage had known me? Was Peter Mullens in New York that night, and was he one of them? This question no sooner took possession of my mind, than I fancied, from the looks and whisperings of him and his companions, that the secret was in their possession. I had no peace from these suspicions until I had satisfied myself that he had not left the college during the holidays. Would Mr. Bradford, by some accident, or through forgetfulness of his promise to me,

speak of the matter to my father, or Henry, or Mrs. Sanderson? Would Millie write about it to her mother? Would it be carelessly talked about by the ladies who had witnessed my disgrace? Would it be possible for me ever to show myself in Bradford again? Would the church learn of my lapse and bring me under its discipline? Would the religious congregations I had addressed hear of my fall from sobriety, and come to regard me as a hypocrite? So sore was my self-love, so sensitive was my pride, that I am sure I should have lied to cover my shame, had the terrible emergency arisen. It did not rise, and for that I cannot cease to be grateful.

It will readily be seen that, while the fear of discovery was upon me, and while I lived a false life of carelessness and even gayety among my companions, to cover the tumults of dread and suspicion that were going on within me, I did not make much progress in spiritual life. In truth I made none at all. My prayers were only wild beseechings that I might be spared from exposure, and pledges of future obedience should my prayers be answered. So thoroughly did my fears of men possess me, that there was no room for repentance toward God, or such a repentance as would give me the basis of a new departure and a better life. I had already tried to live two lives that should not be discordant with each other; now I tried to live two lives that I knew to be antagonistic. It now became an object to appear to be what I was not. I resumed at intervals my attendance upon the prayer-meetings, to make it appear that I still clung to my religious life. Then, while in the society of my companions, I manifested a careless gayety which I did not feel. All the manifestations of my real life took place in the solitude of my room. There, wrestling with my fears, and shut out from my old sources of comfort and strength, I passed my nights. With a thousand luxurious appliances around me, no sense of luxury ever came to me. My heart was a central living coal, and all around it was ashes. I even feared that the coal might die, and that Henry, when he should return, would find his room bereft of all that would give him welcome and cheer.

As the weeks passed away, the fear slowly expired, and, alas! nothing that was better came in its place. No sooner did I begin to experience the sense of safety from exposure, and from the temptation which had brought me such grievous harm, than the old love of luxurious life, and the old plans for securing it, came back to me. I felt sure that wine would never tempt me again, and with this

confidence I built me a foundation of pride and self-righteousness on which I could stand, and regard myself with a certain degree of complacency.

As for efficient study, that was out of the question. I was in no mood or condition for work. I scrambled through my lessons in a disgraceful way. The better class of students were all surpassing me, and I found myself getting hopelessly into the rear. I had fitful rebellions against this, and showed them and myself what I could do when I earnestly tried; but the power of persistence, which is born of a worthy purpose, held strongly in the soul, was absent, and there could be no true advancement without it.

I blush with shame, even now, to think how I tried to cover my delinquencies from my father and Mrs. Sanderson, by becoming more attentive to them than I had ever been in the matter of writing letters. I knew that there was nothing that carried so much joy to my father as a letter from me. I knew that he read every letter I wrote him, again and again—that he carried it in his pocket at his work—that he took it out at meals, and talked about it. I knew, also, that Mrs. Sanderson's life was always gladdened by attentions of this sort from me, and that they tended to keep her heart open toward me. In just the degree in which I was conscious that I was unworthy of their affection, did I strive to present to them my most amiable side, and to convince them that I was unchanged.

This hypocritical, unfruitful life I lived during all that winter; and when Henry came to me in the spring, crowned with the fruits of his labor, and fresh from the loves and friendships of his Bradford home, with his studies all in hand, and with such evident growth of manhood that I felt almost afraid of him, he found me an unhappy and almost reckless laggard, with nothing to show for my winter's privileges but a weakened will, dissipated powers, frivolous habits, deadened moral and religious sensibilities, and a life that had degenerated into subterfuge and sham.

My natural love of approbation—the same greed for the good opinion and the praise of others which in my childhood made me a liar—had lost none of its force, and did much to shape my intercourse with all around me. The sense of worthlessness which induced my special efforts to retain the good-will of Mrs. Sanderson, and the admiration and confidence of my father, moved me to a new endeavor to gain the friendship of all my fellow-students. I felt that I could not afford to

have enemies. I had lost none of my popularity with the exclusive clique to which I had attached myself, for even Livingston had seen with delight that I was not disposed to repeat the mistake of which he had been so distressed a witness. I grew more courteous and complaisant toward those whom I had regarded as socially my inferiors, until I knew that I was looked upon by them as a good fellow. I was easy-tempered, ready at repartee, generous and careless; and although I had lost all reputation for industry and scholarship, I possessed just the character and manners which made me welcome to every group. I blush while I write of it, to remember how I curried favor with Mr. Peter Mullens and his set; but to such mean shifts did a mean life force me. To keep the bark of my popularity from foundering, on which I was obliged to trust everything, I tossed overboard from time to time, to meet every rising necessity, my self-respect, until I had but little left.

CHAPTER XIV.

THOUGH Mr. Peter Mullens had but slender relations to my outer life—hardly enough to warrant the notice I have already taken of him—there was a relation which I recognized in my experience and circumstances that makes it necessary for me to say more of him. He had recognized this relation himself, and it was this that engendered my intense personal dislike of him. I knew that his willing dependence on others had robbed him of any flavor of manhood he might at one time have possessed, and that I, very differently organized, was suffering from the same cause. I watched the effect upon him of this demoralizing influence, with almost a painful curiosity.

Having, as he supposed, given up himself, he felt that he had a right to support. There seemed to him to be no sweetness in bread that could be earned. Everything came amiss to him that came with personal cost. He was always looking for gifts. I will not say that he prayed for them, but I have no doubt that he prayed, and that his temporal wants mingled in his petitions. No gift humiliated him: he lived by gifts. His greed for these was pitiful, and often ludicrous. Indeed, he was the strangest mixture of piety, avarice, and beggarly meanness that I had ever seen.

My second spring in college was verging upon summer. The weather was intensely hot, and all the fellows had put themselves

into summer clothing—all but poor Peter Mullens. He had come out of the winter very seedy, and his heavy clothing still clung to him, in the absence of supplies of a lighter character. Although he had a great many pairs of woolen socks and striped mittens, and a dozen or two neck-ties, which had been sent to him by a number of persons to whom he gave the indefinite designation of "the sisters," there seemed to be no way by which he could transform them into summer clothing. He was really in a distressed condition, and "the sisters" failed to meet the emergency.

At a gathering of the fellows of our clique one night, his affairs were brought up for discussion, and it was determined that we should go through our respective wardrobes and weed out all the garments which we did not intend to wear again, and, on the first dark night, take them to his room. I was to make the first visit, and to be followed in turn by the others.

Accordingly, having made up a huge bundle of garments that would be of use to him, provided he could wear them—and he could wear anything, apparently—I started out one evening, and, taking it in my arms, went to his room. This was located in a remote corner of the dormitory, at the bottom of a narrow hall, and as the hall was nearly dark, I deposited my bundle at the door and knocked for admission.

"Come in!" responded Mullens.

I entered, and by good fortune found him alone. He was sitting in the dark, by the single open window of his room, and I could see by the dim light that he was stripped of coat and waistcoat. He did not know me at first, but, rising and striking a light, he exclaimed: "Well, this is kind of you, Bonnicastle. I was just thinking of you."

He then remembered that his glasses had been laid aside. Putting them on, he seemed to regard himself as quite presentable, and made no further attempt to increase his clothing. I looked around the bare room, with its single table, its wretched pair of chairs, its dirty bed, and its lonely occupant, and contrasting it with the cosy apartment I had just left, my heart grew full of pity for him.

"So you were thinking of me, eh?" I said. "That was very kind of you. Pray, what were you thinking? Nothing bad, I hope."

"No, I was thinking about your privileges. I was thinking how you had been favored."

It was strange that it had never occurred to Mullens to think about or to envy those

who held money by right, or by the power of earning it. It was only the money that came as a gift that stirred him. There were dozens or hundreds of fellows whose parents were educating them, but these were never the subject of his envious thoughts.

"Let's not talk about my privileges," I said. "How are you getting along yourself?"

"I am really very hard up," he replied. "If the sisters would only send me trousers, and such things, I should be all right, but they don't seem to consider that I want trousers any more than they do, confound them."

The quiet indignation with which this was uttered amused me, and I laughed outright. But Mullens was in sober earnest, and going to his closet he brought forth at least a dozen pairs of thick woolen socks, and as many pairs of striped mittens, and laid them on the table.

"Look at that pile," said Mullens, "and weep."

The comical aspect of the matter had really reached the poor fellow's apprehension, and he laughed heartily with me.

"What are you going to do with them?" I asked.

"I don't know," he replied; "I've thought of an auction. What do you say?"

"Why don't you try to sell them at the shops?" I inquired.

"Let me alone for that. I've been all over the city with 'em," said he. "One fellow said they didn't run even, and I don't think they do, very, that's a fact. Another one said they looked like the fag-end of an old stock; and the last one I went to asked me if I stole them."

"Well, Mullens, the wind is tempered to the shorn lamb," I said, consolingly. "It's June."

"But it don't apply," said Mullens. "I'm not shorn. The trouble is that I've got too much wool."

This was bright for Mullens, and we both laughed again. After the laugh had passed, I said: "I think I know of eight or ten fellows who will relieve you of your surplus stock, and, as I am one of them, I propose to take a pair of socks and a pair of mittens now."

The manner of the man changed immediately. His face grew animated, and his eyes fairly gleamed through his spectacles. He jumped to his feet as I spoke of purchasing, and exclaimed: "Will you? What will you give? Make us an offer."

"Oh, you must set your own price," I said.

"Well, you see they are very good socks, don't you?" said Mullens. "Now, every stitch in those socks and mittens was knit, upon honor. There isn't a mercenary inch of yarn in 'em. Take your pick of the mittens. By the way, I haven't shown you my neck-ties," and, rushing to his closet, he brought forth quite an armful of them.

The humble sufferer had become a lively peddler, bent upon driving the sharpest bargain and selling the most goods possible to a rare customer. Selecting a pair of socks, a pair of mittens, and a neck-tie of a somewhat soberer hue than I had been accustomed to wear, he laid them by themselves, and then, wiping his forehead and his glasses with a little mop of a handkerchief, he put on a mildly judicial face, and said:

"Bonnicastle, my dear friend, I've always taken a great deal of interest in you; and now you have it in your power to do me a world of good. Think, just think, Bonnicastle, of the weary hours that have been spent on these articles of apparel by those of whom the world is not worthy! Think of the benevolence that inspired every stitch. Think of the—of the—thoughts that have run through those devoted minds. Think of those sisters respectively saying to themselves: 'I know not whom I am laboring for—it may be for Mullens, or it may be for one more worthy,—but for whomsoever it is, it is for one who will stand up in defense of the truth when I am gone. His feet, bent upon errands of mercy, will be kept comfortable by these stockings. His hands, carrying succor to the fallen, and consolation to the afflicted, will be warmed by these mittens. These neck-ties will surround the neck—the—throat—of one who will breathe words of peace and good-will.' My dear Bonnicastle, there is more in these humble articles of apparel than appears to the carnal eye,—much more—incalculably more. Try to take it in when we come to the matter of price. Try to take it all in, and then discharge your duty as becomes a man who has been favored."

"Look here, Mullens," said I, "you are working on my feelings, and the articles are getting so expensive that I can't buy them."

"Oh, don't feel that way;" said he, "I only want to have you get some idea what there is in these things. Why, there's love, good-will, self-sacrifice, devotion, and woman's tender heart."

"Pity there couldn't have been some trousers," said I.

Mullens' lip quivered. He was not sure whether I was joking or not, but he laid his hand appealingly upon my knee, and then settled back in his chair and wiped his forehead and spectacles again. Having made up my mind that Mullens had determined to raise an enormous revenue from his goods, I was somewhat surprised when he said briskly, "Bonnicastle, what do you say to a dollar and a half? That's only fifty cents an article, and the whole stock will bring me only fifteen or twenty dollars at that price."

"I'll take them," said I.

"Good!" exclaimed Mullens, slapping his knee. "Who'll have the next bowl? Walk up, gentlemen!"

Mullens had evidently officiated in an oyster-booth at militia musters. In his elated state of feeling, the impulse to run into his old peddler's lingo was irrepressible. I think he felt complimented by the hearty laugh with which I greeted his huckster's cry.

"If I'm going into this business," said Mullens, "I really must have some brown paper. Do you suppose, Bonnicastle, that if you should go to one of these shops, and tell them the object,—a shop kept by one of our friends, you know,—one who has the cause at heart—he would give you a package of brown paper? I'd go myself, but I've been around a good deal."

"Wouldn't you rather have me buy some?" I asked.

"Why, no; it doesn't seem to be exactly the thing to pay out money for brown paper," responded Mullens.

"I'm not used to begging," I said.

"Why, it isn't begging, Bonnicastle; it's asking for the cause."

"You really must excuse me, Mullens."

"All right," said he; "here's an old newspaper that will do for your package. Now don't forget to tell all your friends that I am ready for 'em. Tell 'em the cause is a good one—that it really involves the—the welfare of society. And tell 'em the things are dirt cheap. Don't forget that."

Mullens had become as cheerful and lively as a cricket; and while he was doing up my package, I opened the door and brought in my bundle. As I broke the string and unfolded the bountiful contents, he paused in a pleased amazement, and then, leaping forward and embracing me, exclaimed: "Bonnicastle, you're an angel! What do you suppose that pile is worth, now, in hard cash?"

"Oh, I don't know; it's worth a good deal to you," I replied.

"And you don't really feel it at all, do you now? Own up."

"No," I answered, "not at all. You are welcome to the whole pile."

"Yes, Bonnicastle," said he, sliding smoothly back from the peddler into the pious beneficiary, "you've given out of your abundance, and you have the blessed satisfaction of feeling that you have done your duty. I don't receive it for myself, but for the cause. I am a poor, unworthy instrument. Say, Bonnicastle, if you should see some of these things on others, would you mind?"

"Not in the least," I said. "Do you purpose to share your good fortune with your friends?"

"Yes," said Mullens, "I shall sell these things to them, very reasonably indeed. They shall have no cause to complain."

At this moment there was a knock, and Livingston, with a grave face, walked in with his bundle, and opening it, laid it upon the table. Mullens sank into his chair, quite overwhelmed. "Fellows," said he, "this is too much. I can bear one bundle, but under two you must excuse me if I seem to totter."

Another and another followed Livingston into the room, and deposited their burdens, until the table was literally piled. Mullens actually began to snivel.

"It's a lark, fellows," said Mullens, from behind his handkerchief. "It's a lark: I know it, I see it; but oh, fellows! it's a blessed lark—a blessed, blessed lark! Larks may be employed to bring tribute into the storehouse. Larks may be overruled, and used as means. I know you are making fun of me, but the cause goes on. If there isn't room on the table, put them on the floor. They shall all be employed. If I have ever done you injustice in my thoughts, fellows, you must forgive me. This wipes out everything; and as I don't see any boots in your parcels, perhaps you'll be kind enough to remember that I wear tens, with a low instep. Has the last man come? Is the cup full? What do you suppose the whole pile is worth?"

Mullens ran on in this way, muddled by his unexpected good fortune and his greed, with various pious ejaculations which, for very reverence of the words he used, my pen refuses to record.

Then it suddenly occurred to him that he was not making the most of his opportunities. Springing to his feet, and turning peddler in an instant, he said: "Fellows, Bonnicastle has bought a pair of socks, a pair of striped mittens and a neck-tie from my surplus stock.

I've got enough of them to go all around. What do you say to them at fifty cents apiece?"

"We've been rather expecting," said Livingston, with a quiet twinkle in his eye, "that you would make us a present of these."

This was a new thought to Mullens, and it sobered him at once. "Fellows," said he, "you know my heart; but these things are a sacred trust. They have been devoted to a cause, and from that cause I cannot divert them."

"Oh! of course not," said Livingston; "I only wanted to test your faithfulness. You're as sound as a nut."

The conversation ended in a purchase of the "surplus stock," and then, seeing that the boys had not finished their fun, and fearing that it might run into some unpleasant excesses, Livingston and I retired.

The next morning, our ears were regaled with an account of the remaining experiences of the evening, but it does not need to be recorded here. It is sufficient to say that before the company left his room, Mullens was arrayed from head to foot with a dress made up from various parcels, and that in that dress he was obliged to mount his table and make a speech. He appeared, however, the next morning clothed in comfortable garments, which of course were recognized by their former owners, and formed a subject of merriment among them. We never saw them, however, upon any others of his set, and he either chose to cover his good fortune from them by selling his frippery to the Hebrew dealers in such merchandise, or they refused to be his companions in wearing garments that were known in the college.

CHAPTER XV.

FROM the first hour of my direct violation of my conscience, there began, almost imperceptibly at first, a change of my views of religious doctrine and obligation. It was one of the necessities of my position. Retaining the strict notions of my childhood and younger youth, I should not have enjoyed a moment of peace; and my mind involuntarily went to work to reconcile my opinions to my looser life. It was necessary to bring my convictions and my conscience into harmony with my conduct, else the warfare within me would have been unendurable. The first change related to duty. It seemed to me that God, remembering that I was dust, and that I was peculiarly weak under specific temptations, would be less rigid in his requirements of me than I had formerly supposed. As this conclusion seemed to make him more lovable to me, I permitted it

to deceive me wholly. Then there was something which flattered me in being considered less "blue" than the majority of those who made a profession of religion. It was pleasant to be liberal, for liberality carried no condemnation with it of the careless life around me.

But this was not all. It was only the open gate at which I entered a wide field of doubt. All my religious opinions, took on an air of unreality. The old, implicit faith which, like an angel with a sword of flame, had stood at the door of my heart, comforting me with its presence, and keeping at a distance all the shapes of unbelief, took its flight, and the dark band gathered closer, with a thousand questions and suggestions. Was there a God? Was the God whom I had learned to worship anything more than a figment of conspiring imaginations? If He were more than this, had he revealed himself in words? Was Jesus Christ a historical character or a myth? Was there any such thing, after all, as personal accountability? Was the daily conduct of so insignificant a person as myself of the slightest moment to a Being who held an infinite universe in charge? Who knew that the soul was immortal, and that its condition here bore any relation to its condition there? Was not half of that which I had looked upon as sin made sin only by a conscience wrongly educated? Was drinking wine a sin in itself? If not, why had it so worried me? Other consciences did not condemn an act which had cost me my peace and self-respect. Who knew but that a thousand things which I had considered wrong were only wrong because I so considered them? After all my painstaking and my prayers, had I been anything better than a slave to a conscience perverted or insufficiently-informed?

The path from an open violation of conscience to a condition of religious doubt, is as direct as that which leads to heaven. It was so in my case, and the observation of a long life has shown me that it is so in every case. Just in the proportion that my practice degenerated did my views become modified to accommodate themselves to my life.

I said very little about the changes going on in my mind, except to my faithful companion and friend, Henry. When he returned from Bradford, he, for the first time, became fully aware of the great change that had taken place in me. He was an intense hater of sham and cant, and sympathized with me in my dislike of the type of piety with which we were often thrown in contact. This, I suppose, had blinded him to the fact that I was

trying to sustain myself in my criticism of others. I could not hide my growing infidelity from him, however, for it seemed necessary for me to have some one to talk with, and I was conscious of a new disposition to argue and defend myself. Here I was misled again. I fancied that my modification of views came of intellectual convictions, and that I could not be to blame for changes based upon what I was fond of calling "my God-given reason." I lost sight of the fact that the changes came first, and that the only office to which I put "my God-given reason" was that of satisfying and defending myself. Oh, the wretched sophistries of those wretched days and years!

I do not like to speak so much of prayer as I have been compelled to in these pages, for even this sounds like cant to many ears; but, in truth, I cannot write the story of my life without it. I do not believe there can be such a thing as a truly religious life without prayer. The religious soul must hold converse and communion with the Infinite or its religion cannot live. It may be the simple expression of gratitude and desire. It may be the prostration of the soul in worship and adoration. It may be the up-springing of the spirit in strong aspiration, but in some way or form there must be prayer, or religion dies. There must be an open way between the heart of man and the heart of the Infinite—a ladder that reaches from the pillow of stone to the pillars of the Throne where angels may climb and angels may descend—or the religious life of the soul can have no ministry.

In my changed condition and circumstances, I found myself deprived of this great source of life. First my sin shut me away, and my neglect of known and acknowledged duty. Then my frivolous pursuits and trifling diversions rendered me unfit for the awful presence into which prayer led me. Then unbelief placed its bar before me. In truth, I found in prayer, whenever I attempted it, only a hollow expression of penitence, from a weak and unwilling heart, toward a being in whose existence I did not more than half believe.

I bowed with Henry at our bed every night, but it was only a mockery. He apprehended it at last, and questioned me about it. One night, after we had risen from our knees, he said: "Arthur, how is it with you? I don't understand how a man who talks as you do can pray with any comfort to himself. You are not at all what you used to be."

"I'll be frank with you, Henry," I answered. "I don't pray with any comfort to

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myself, or any profit either. It's all a sham, and I don't intend to do any more of it."

"Oh, Arthur, Arthur, has it come to this!" exclaimed the dear fellow, his eyes filling with tears. "Have you gone so far astray? How can you live? I should think you would die."

"You see," I said carelessly, "I'm in very good health. The world goes on quite well. There are no earthquakes or hurricanes. The sun rises and sets in the old way, and the wicked prosper like the righteous, the same as they have always done, and get along without any serious bother with their consciences besides. The fact is, that my views of everything have changed, and I don't pray as I used to pray, simply because the thing is impossible."

Henry looked at me while I said this with a stunned, bewildered expression, and then, putting his arms around my neck, bowed his head upon my shoulder and said, half choked with emotion: "I can't bear it; I can't bear it. It must not be so."

Then he put me off, and looked at me. His eyes were dry, and a determined, almost prophetic expression was in them as he said: "It will not be so; it shall not be so."

"How are you going to prevent it?" I inquired, coolly.

"I shall not prevent it, but there is one who will, you may be very sure," he replied. "There is a God, and he hears the prayers of those who love him. You cannot prevent me from praying for you, and I shall do it always. You and I belong to the same church, and I am under a vow to watch over you. Besides, you and I promised to help one another in every emergency, and I shall not forget the promise."

"So I am under a guardian, am I?"

"Yes, you are under a guardian, a very much more powerful guardian than I am," he replied.

"I suppose I shall be taken care of, then," I said.

"Yes, you will be taken care of; if not in the mild way, with which you have hitherto been treated, then in a rough way to which you are not used. The prayers, and hopes, and expectations of such a father as yours are not to be disregarded and to go for nothing. By some means, tender or terrible, you are to be brought out of your indifference and saved."

There was something in this talk that brought back to me the covert threat that I had heard from the lips of Mr. Bradford, of which I had not thought much. Were he and Henry leagued together in any plan that would bring me

punishment? That was impossible, yet I grew suspicious of both of them. I did not doubt their friendship, yet the thing I feared most was an interference with my prospects of wealth. Was it possible that they, in case I should not meet their wishes, would inform Mrs. Sanderson of my unworthiness of her benefactions, and reduce me to the necessity and shame of taking care of myself? This was the great calamity I dreaded. Here was where my life could only be touched. Here was where I felt painfully sensitive and weak.

A little incident occurred about this time which rendered me still more suspicious. I had been in the habit of receiving letters from Mrs. Sanderson, addressed in the handwriting of Mrs. Belden. Indeed, not a few of my letters from The Mansion were written entirely by that lady, under Mrs. Sanderson's dictation. I had in this way become so familiar with her handwriting that I could hardly be mistaken in it, wherever I might see it. From the first day of our entering college, Henry had insisted on our having separate boxes at the Post-Office. I had never known the real reason for this, nor had I cared to inquire what it might be. The thought had crossed my mind that he was not willing to have me know how often he received letters from my sister. One morning he was detained by a severe cold from going, in his accustomed way, for his mail, and as I was at the office, I inquired whether there were letters for him. I had no object in this but to do him a brotherly service, but as his letters were handed to me, I looked them over, and was startled to find an address in what looked like Mrs. Belden's handwriting. I examined it carefully, compared it with several addresses from her hand which I had in my pocket, and became sure that my first suspicions were correct.

Here was food for the imagination of a guilty man. I took the letters to Henry, and handing them to him in a careless way, remarked that, as I was at the office, I thought I would save him the trouble of sending for his mail. He took the package, ran it over in his hand, selected the letter that had attracted my attention, and put it into his pocket unopened. He did not look at me, and I was sure he could not, for I detected a flush of alarm upon his face at the moment of handing the letters to him. I did not pause to see more, or to make any inquiry for Bradford friends, and, turning upon my heel, I left the room.

I could not do else than conclude that there was a private understanding of some sort be-

tween him and Mrs. Belden. What this was, was a mystery which I taxed my ingenuity to fathom. My mind ran upon it all day. I knew Henry had seen Mrs. Belden at Mr. Bradford's, and even at my father's during the winter, for she had maintained her friendship for Claire. Could there have sprung up a friendly intimacy between her and Henry of which this correspondence was an outgrowth? It did not seem likely. However harmless my surmises might be, I always came back to the conclusion that through Mrs. Belden and Henry an espionage upon my conduct had been established by Mrs. Sanderson, and that all my words and acts had been watched and reported. As soon as this conviction became rooted in my mind, I lost my faith in Henry, and from that hour, for a long time, shut away my confidence from him. He could not but notice this change, and he was deeply wounded by it. Through all the remainder of the time we spent in college together, there was a constraint in our intercourse. I spent as little time with him as possible, though I threw new guards around my conduct, and was careful that he should see and hear nothing to my discredit. I even strove, in a weak way, to regain something of the ground I had lost in study; but as I was not actuated by a worthy motive, my progress was neither marked nor persistent.

I certainly was not happy. I sighed a thousand times to think of the peace and inspiration I had lost. My better ambitions were gone, my conscience was unsatisfied, my disposition to pray had fled, my Christian hope was extinguished, and my faith was dead. I was despoiled of all that made me truly rich; and all that I had left was the good-will of those around me, my social position, and the expectation of wealth which, when it should come into my hands, would not only give me the luxurious delights that I craved as the rarest boon of life, but command the respect as well of the rich as of those less favored than myself. I longed to get through with the bondage and the duty of my college life. I do not dare to say that I longed for the death of my benefactress. I will not acknowledge that I had become so base as this, but I could have been reconciled to anything that would irrevocably place in my power the wealth and independence I coveted.

It is useless to linger farther over this period of my life. I have traced with sufficient detail the influences which wrought my transformation. They have been painful in the writing, and they must have been equally painful in

the reading, to all those who have become interested in my career, welfare and character. My suspicions that Henry was a spy upon my conduct were always effaced for the time whenever I went home. Mrs. Sanderson, upon whom the passing years began to lay a heavy finger, showed no abatement of affection for me, and seemed even more impatient than I for the termination of my college life and my permanent restoration to her home and society. Mrs. Belden was as sweet and lady-like and cordial as ever. She talked freely of Henry as one whom she had learned to admire and respect, and thought me most fortunate in having such a companion. There was a vague shadow of disappointment on my father's face, and I saw too, with pain, that time and toil had not left him untouched with change.

My visits in Bradford always made me better. So much was expected of me, so much was I loved and trusted, so sweet and friendly were all my acquaintances, that I never left them to return to my college life without fresh resolutions to industry and improvement. If these resolutions were abandoned, those who know the power of habit and the influence of old and unrenounced companionships will understand the reason why. I had deliberately made my bed, and was obliged to lie in it. My compliant disposition brought me uniformly under the yoke of the old persuasions to indolence and frivolous pursuits.

Livingston went away when his time came. There was much that was lovable in him. He had a stronger character than I, and he had always been so used to wealth and the expectation of wealth that he was less harmed than I by these influences. Peter Mullens went away, and though I occasionally heard about him, I saw him no more for many years. I became at last the leader of my set, and secured a certain measure of respect from them because I led them into no vicious dissipations. In this I took a degree of pride and satisfaction; but my teachers had long abandoned any hope that I should distinguish myself, and had come to regard me coldly. My religious experiences were things of the past. I continued to show a certain respect for religion, by attending the public services of the church. I did everything for the sake of appearances, and for the purpose of blinding myself and my friends to the deadness and hollowness of a life that had ceased to be controlled by manly and Christian motives.

At last the long-looked-for day of release approached, and although I wished it to come, I wished it were well over and forgotten. I

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had no honors to receive, and I knew that it was universally expected that Henry would carry away the highest of his class. I do not think I envied him his eminence, for I knew he had nobly earned it, and that in the absence of other advantages it would do him good. I had money and he had scholarship, which, in time, would give him money. In these possessions we should be able to start more evenly in life.

The time passed away, until the day preceding the annual commencement dawned. In the middle of this day's excitements, as I was sitting in my room, there was a rap at my door. There were a dozen of my fellows with me, and we were in a merry mood. Supposing the caller to be a student, I made a response in some slang phrase, but the door was not opened. I then went to it, threw it wide, and stood face to face with my father. I was not glad to see him, and as my nature was too transparent to permit me to deceive him, and he too sensitive to fail of apprehending the state of my feelings, even if I had endeavored to do so, the embarrassment of the moment may be imagined.

"Well, father," I said, "this is a surprise."

The moment I pronounced the word "father," the fellows began to retire, with hurried remarks about engagements, and with promises to call again. It was hardly ten seconds before every man of them was out of my room.

The dear old man had dressed himself in his plain best, and had come to see realized the great hope of his life, and I, miserable ingrate that I was, was ashamed of him. My fellows had fled the room because they knew I was, and because they wished to save me the pain of presenting him to them. As soon as they were gone I strove to reassure him, and to convince him that I was heartily glad to see him. It was easy for him to make apologies for me, and to receive those which I made for myself. He had had such precious faith in me that he did not wish to have it shaken. He had left his work and come to the City of Elms to witness my triumphs. He had intended to give me a glad day. Indeed, he had had dreams of going about to make the acquaintance of the professors, and of being entertained with a view of all the wonders of the college. I knew him so well that I did not doubt that he expected to be taken in hand by his affectionate son on his arrival, and to go with him everywhere, sharing his glory. Never in my life had I received so startling a view of the meanness of my own character as on that morning. I could not

possibly hide myself from myself, and my disgust with myself was measureless. Here was a man whom I loved better than I loved, or had ever loved, any human being—a man worthy of my profoundest respect—the sweetest, simplest, purest, noblest man whom I had ever known, with a love in his heart for me which amounted to idolatry—yet I could have wished him a thousand miles away, rather than have my gay and aristocratic companions find me in association with him, and recognize the relations that existed between us.

What should I do with him? Where could I put him? How could I hide him? The thought of showing him around was torture. Why had he not stayed at home? What could I say to him to explain my failure? How could I break the force of the blow which he must soon receive? I inquired about home and its affairs. I talked of everything but that which he most desired to talk about, and all the time I was contriving ways to cut him adrift, or to cover him up.

I was saved the trouble I anticipated by my good angel Henry, who, when he came, was so heartily delighted to see my father that the whole course of relief was made plain. Henry knew me and my circumstances, and he knew that my father's presence was unwelcome. He at once took it upon himself to say that I had a great many companions, and that they would want me with them. So he should have the pleasure of looking after my father, and of showing him everything he wanted to see. He disregarded all my protests, and good-naturedly told me to go where I was wanted.

The good old man had a pleasant time. He visited the cabinets, he was introduced to the professors when he chanced to meet them, he saw all that was worth seeing. He had a conversation with Henry about me, which saved me the making of apologies that would have been essential falsehoods. I had won no honors, Henry told him, because I had had too much money, but I was popular, was quite the equal of many others, and would receive my degree. I saw them together, going from building to building and walking under the elms and along the streets. That which to my wretched vanity would have been pain was to Henry's self-assured and self-respectful manhood a rare pleasure. I doubt whether he spent a day during his whole college life more delightfully than that which he spent with my father.

At night I had another call. Mr. Bird came in. I went to him in my old way, sat

down in his ample lap, and put my arms around his neck.

"Arthur, my boy, I love you," he said. "There is a man in you still, but all that I feared might be the result of your circumstances has happened. Henry has outstripped you, and while we are all glad for him, we are all disappointed in you."

I tried to talk in a gay way about it, but I was troubled and ashamed.

"By the way, I have seen your father today," he said.

"And what did he say?" I inquired.

"No matter what he said: he is not happy. You have disappointed him, but he will not upbraid you. He is pained to feel that privileges which seemed to him inestimable should have been so poorly improved, and that the boy from whom he hoped and for whom he has sacrificed so much should have shown himself so careless and unworthy."

"I'm sorry for him," I said.

"Very well, my boy; and now tell me, has the kind of life which has cost him so much pain paid you?"

"No."

"Are you going to change?"

"I don't know: I doubt if I do," I responded.

"Has money been a good thing for you?"

"No: it has been a curse to me."

"Are you willing to relinquish it?"

"No: I'm spoiled for poverty. It's too late."

"Is it? We'll see."

Then the good man, with a stern look upon his face, kissed me as he used to in the old times, and took his leave.

Here was another warning or threat, and it filled me with uneasiness. Long after Henry had fallen asleep that night, I lay revolving it in my mind. I began to feel that I had been cruelly treated. If money had spoiled me, who had been to blame? It was forced upon me, my father consenting. It had wrought out its natural influence upon me. Somebody ought to have foreseen it. I had been wronged, and was now blamed for that for which others were responsible.

Commencement day came, with its crowd of excitements. The church in which the public exercises were held was thronged. Hundreds from the towns and cities around had assembled to witness the bestowal of the honors of study upon their friends and favorites. Our class had, as is usual on such occasions, our places together, and as I did not belong to the group of fellows who had appointments for orations, I was with the class.

Taking my seat, I looked around upon the multitude. Beautifully dressed ladies crowded the galleries, and I was deeply mortified that I should win neither their smiles nor their flowers. I was, for the time at least, a non-entity. They had eyes for none but those who had won the right to admiration.

At my right I saw a figure which I thought to be that of an acquaintance. His head was turned from me, while he conversed with a strikingly beautiful girl at his side. He looked towards the stage at last, and then I saw that it was Mr. Bradford. Could that young woman be Millie? I had not seen her since I so shamefully encountered her more than two years before. It was Millie. She had ripened into womanhood during this brief interval, and her beauty was conspicuous even among the score of beauties by which she was surrounded.

The orators came and went, receiving their tributes of applause from the audience, and of flowers from their friends, but I had no eyes for any one but Millie. I could regard her without hindrance, for she did not once look at me. I had always carried the thought of her in my heart. The little talks we had had together had been treasured in my memory among its choicest possessions. She had arrived at woman's estate, and I had now no laurels to lay at her feet. This was the one pungent drop of gall in my cup of wormwood, for then and there I acknowledged to myself that in a vague way I had associated her in my imagination with all my future life. When I had dreamed of one who should sit in Mrs. Sanderson's chair, after she had passed away, it was always Millie. I had not loved her with a man's love, but my heart was all open toward her, ready to kindle in her smile or the glance of her marvelous eyes. I knew there was only one whom she had come to see, and rejoiced in the thought that she could be nothing more to him than a friend, yet I grudged the honor which he was that day to win in her eyes.

At last the long roll of speakers was exhausted, and Henry came upon the stage to deliver the valedictory. He was received with a storm of cheers, and, perfectly self-possessed, came forward in his splendid young manhood to perform his part. I knew that Mr. Bird was somewhere in the audience, looking on and listening with moistened eyes and swelling heart. I knew that my father, in his lonely sorrow, was thinking of his disappointment in me and my career. I knew that Mr. Bradford and Millie were regarding Henry with a degree of pride and gratification

that, for the moment, shut me out of their minds. As his voice rang out over the vast congregation, and cheer after cheer greeted his splendid periods, I bent my head with shame, and tears that had long been strangers to my eyes fell unbidden down my cheeks. I inwardly cursed my indolence, my meanness, and the fortune which had enervated and spoiled me.

As Henry made his bow in retiring, there was a long-continued and universal burst of applause, and a rain of bouquets upon the platform which half-bewildered him. I watched the Bradfords, and the most beautiful bouquet of all was handed by Millie to her father and tossed by him at Henry's feet. He picked up all the others, then raised this to his lips, and, looking up at the gallery, made a profound bow to the giver and retired. Knowing that with my quicker brain it had been in my power to win that crowning honor, and that it was irrevocably lost to me, the poor diploma that came to me among the others of my class gave me no pleasure.

I knew that the young woman was right. She was true to her womanly instincts, and had no honors to bestow except upon the worker and the hero. The man who had demonstrated his manhood won the honor of her womanhood. Henry was everything; I was nothing. "The girl is right," I said to myself, "and some time she shall know that the stuff she worships is in me."

A young man rarely gets a better vision of himself than that which is reflected from a true woman's eyes, for God himself sits behind them. That which a man was intended to be is that which unperturbed womanhood demands that he shall be. I felt at the moment that a new motive had been born in me, and that I was not wholly shorn of power and the possibilities of heroic life.

Before we left New Haven, Mr. Bradford, Mr. Bird, and my father met by appointment. What their business was I did not know, but I had little doubt that it related to me. I was vexed by the thought, but I was too proud to ask any questions. I hoped that the whole Bradford party would find themselves in the same conveyance on the way home; but on the morning following commencement, my father, Henry, and myself took our seats in the coach, and Mr. Bradford and Millie were left behind. I had not spoken to either of them. I did not like to call upon Millie, and her father had not sought me.

I was not disposed to talk, and all the conversation was carried on by my father and

Henry. I saw that the young man had taken a warm place near my father's heart—that they understood and appreciated one another perfectly. Remembering what an idol I had been, and how cruelly I had defaced my own lineaments and proved myself unworthy of the worship, a vision of this new friendship was not calculated to increase my happiness. But I was full of my plans. I would win Millie Bradford's respect or I would die. My imagination constructed all sorts of impossible situations in which I was to play the part of hero, and compel her admiration. I would devote myself to labor; I would acquire a profession; I would achieve renown; I would become an orator; I would win office; I would wrench a bough from the highest laurel, and, dashing it at her feet, say: "There! I have earned your approval and your smile; give them to me!"

How much practical power there is in this kind of vaporizing is readily appreciated. I had at last my opportunity to demonstrate my possession of heroism, but it did not come in the form I anticipated and hoped for.

Our welcome home was cordial. My poor mother thought I had grown thin, and was afraid I had studied too much. The unintended sarcasm was not calculated to reassure me. Henry and Claire were happy, and I left the beloved group to seek my own lonelier home. There I manifested a delight I did not feel. I tossed my diploma in Mrs. Sanderson's lap, and lightly told her that there was the bit of sheep-skin that had cost her so much. Mrs. Belden congratulated me, and the two women were glad to have me at home. I spent the evening with them, and led the conversation, so far as I could, into channels that diverted their minds from uncomfortable inquiries.

Our life soon took on the old habits, and I heartily tried to make myself tributary to the comfort and happiness of the house. Poor old Jenks was crippled with rheumatism, and while he was made to believe that the domestic establishment could not be operated without him, he had in reality become a burden. As the weather grew intensely hot, and Mrs. Sanderson showed signs of weakness, Mrs. Belden took her away to the seaside again, leaving me once more the master of The Mansion.

A little incident occurred on the morning of Mrs. Sanderson's departure which left an uncomfortable impression upon my mind. She went into the dining-room, and closed the door behind her. As the carriage was waiting for her, I unthinkingly opened the door,

and found her before the picture. The tears were on her cheeks, and she looked pale and distressed. I impulsively put my arm around her, bent down and kissed her, and led her away. As I did this, I determined that I would find out the secret of that picture if I could. I was old enough to be trusted with it, and I would have it. I did

not doubt that many in the town could tell me all about it, though I knew there were reasons connected with my relations to Mrs. Sanderson that had thus far forbidden them to speak to me about it.

And now, having finished the story of my boyhood and youth, I pass rapidly on to the decisive events of my life.

(To be continued.)

AN OLD-FASHIONED STORY.

THERE were six gigs, and there were six couples. Edmund Burt and I led the way in the first gig. He drove an iron-gray horse. I remember all this perfectly well, my dear, although it happened sixty years ago.

We were all Methodist young people. It was Tom Grigg who first proposed this riding party the week before, when Edmund was walking home with me from Wednesday prayer-meeting. Tom Grigg and Sallie Eliot overtook us, and they had been talking about it, and asked us how we would like it. I fell in with the notion right away, and Edmund thought too that it would be right pleasant, and that was how the affair started. I named it to four other girls, and Edmund asked four young men; these were all members of our class, and knew each other intimately. A pleasanter party couldn't have been got together; and it was in the month of May, and the Spring was very forward that year.

We left Trego at three o'clock in the afternoon, and drove nine miles to Lutherville, where we had supper. Tom Grigg's brother-in-law kept a temperance house there, and a very quiet, genteel tavern it was, though Lutherville hadn't a very good name among Trego people. Trego had not been made a city then, but it was a good-sized town and held its head pretty high; and, though there was some drunkenness and card-playing and such like there, it compared favorably with any town to be found anywhere. But Lutherville people generally were a pretty rough set, though some good families lived thereabouts. But we did not go to the village to see any of the people; we went there because it was a pleasant drive. There are no hills of any size between the two places, but there is a gradual slope all the way, Lutherville lying low at the mouth of Taylor's Creek.

Oh, that ride down there in the sunlight,

and that ride back in the moonlight! It was my first sight of the country that year. We skimmed along the edges of green fields; the roadsides were bordered with dandelions, buttercups, and Mayweed; the air was sparkling, and the grass was of that early Spring green that has a yellow glimmer through it. I could not help breaking out into singing

"Ye fields of light, celestial plains,
Where pure, serene effulgence reigns,
Ye scenes divinely fair,"

and all the others joined in. Then we went through the woods, and they were all green above and all pink below, for they were filled with honeysuckles in full bloom, and the sweet scents blew all about us. Out in the open again, we went round a marsh where the tall blue flags stood in rows "like an army with banners." Then we were in the pines, where the air was strong and spicy, and we all stopped awhile to listen to the strange, solemn sounds among the tree-tops that we had been told was like the roar of the ocean, which none of us had ever seen. Then we drove through Lutherville to the quiet little tavern, where we had a nice supper. The ride back was pleasant, too, but in a different way. We were not so gay; moonlight is very solemnizing to the feelings, I think. The night was not very bright, for the moon was past the full, and things were a little hazy and indistinct.

You know what strange shadows the moon makes, and as we drove pretty fast they seemed to be flitting about in an unearthly way, but, of course, always towards Lutherville, because we were riding towards the moon. I enjoyed the night—its strangeness and sweet solemnity. But afterwards this ride up from Lutherville seemed to me like a sort of prophecy, such as we have in dreams, and to this day, if I am belated in a country ride, and

see the moonlight streaming in under the trees, and the shadows flitting about, my mind goes back to that ride, and to Lutherville, and the dreadful sights—But I'll tell you about that by and bye. Now I will finish about the ride.

Was I engaged to Edmund Burt? O, no. There had never been anything like courting between him and me. I was an only child, and an orphan from three years old, and I had always known Edmund; and for seven years past he had been like a brother to me. We both experienced religion at the same revival, and made our public profession at the same time, when I was only fourteen years old. He was then eighteen, and we had both continued in full church-membership ever since; and when we took this ride I was just turned twenty-one.

What did we talk about? Of the things around us; a good deal about church matters, and some little about business; for Edmund had lately been made foreman in his father's shop, and Mr. Burt was accounted the best shoemaker in that part of the country, and did a large business, having sometimes a dozen apprentices; and I had learned my trade, and set up in the dressmaking business with Sally Eliot. In Trego, in those days, working at a trade was not considered lowering to the dignity of a young woman, and I always went into the very best Methodist society.

We reached home that night about eleven o'clock, and I thought that was the last of our ride, but I was mistaken.

It was on a Monday afternoon that we went to Lutherville; for work was apt to be rather slack with all of us at the beginning of the week; and the very next day we heard of it in a way that was not exactly agreeable. Sally and I had rented a work-room in the business part of Trego, in a house next door to Mr. Sands, a grocer, and one of our prominent church-members; and as Mrs. Sands's kitchen and our room opened on the same back porch, she said to us, as soon as the weather got a little warm, "There's no need, girls, for you to go to the expense of a fire to heat your irons; there's always a fire on my kitchen hearth, and you're welcome to a place there when you want it." So we thanked her, and accepted her offer, for it was easy to step from our room to the porch and right into her kitchen, and it was not uncommon for us to stop a minute or two for a chat. Sometimes Sally or I went out by the day, and sometimes we took in work, just as the orders happened to come in, but that day we were both in the room; and, late in the after-

noon, Sally took an iron into the kitchen to put to the fire, and found Mrs. Sands just come in from a visit to Mrs. Lines, our preacher's wife.

"What's this I've been hearing about you young people?" she said, in her short way, for she was just as quick to find fault as to do a kindness—that was Mrs. Sands—"what's this I hear about party going? And to a Lutherville tavern, too! Seems to me you might have found a more respectable place! You'll have to be dealt with, all of you, or scandal will be brought upon the decent church-members."

Sally was so frightened she could not answer a word, and came back with a pale, scared face, to tell me what she had heard. I just walked straight into the kitchen.

"Sister Sands," said I, "'judge not, that ye be not judged;' we are quite as decent church-members as yourself; and you'd better find out the truth before you talk about our not being respectable. We did go to Lutherville yesterday, because it was a pleasant ride, and the tavern where we took supper is a genteel house of entertainment, kept by a Methodist, who never sells liquor; and that is more than can be said of some church-members who hold their heads pretty high."

That struck home, for it was well known that Noah Sands sometimes traded in liquors, though he did not make a business of it. This was all before any great temperance movement, and the church was too easy with those who sold liquor in large quantities, though very hard on those who drank too much of it.

"Blackening other folks ain't going to whitewash yourself," she said, pretty tartly. "You've got into hot-water, and I only hope you may get out of it!"

"We haven't got in it yet," said I, as I took up my iron. "We have done nothing unbecoming modest Methodist young women, and you may be sure the church will look on it in the same light that I do."

When my anger had cooled off, I began to feel a little worried and anxious; and on my way home I stopped at Edmund's shop, to ask him to get word to the young men of the riding-party that I wanted them to meet at my house the next evening. I got the girls together, and on Wednesday evening the whole company was assembled in my little parlor.

I had rented a nice little frame house, with four good-sized rooms, and a kitchen in the "lean-to," for which I paid thirty-five dollars a year. I took it chiefly for the sake of an

aunt of mine, who had married badly. Her husband being a dangerous-tempered man when drunk (which was pretty much all the time), she had left him and tried to support herself and her children. But she could not earn much, and if she ever got a little money ahead her husband would manage to get it all away from her. When she lived with me he did not trouble her, for he had no right to set foot over the threshold of my house, and you may be sure he didn't get an invitation. It wasn't much she could earn, having little children to care for, but she put her furniture into the house.

It was in the parlor of this house the little company assembled. All that I wanted was to let them know that I did not consider that we had done anything sinful, and that I should make no mention of this ride in giving in my experience at class. All agreed with me, and it was decided to say nothing about it at Saturday class.

The class-meeting passed over quietly, though I could see all were surprised that nothing was said about that Monday ride. The class was fuller than usual, some being brought there by curiosity, but they were disappointed.

On Monday, however, our class-leader came to see me, and he pretty soon let me know the object of his visit.

"Sister Mincey," he said, "I fear that your feet are set in slippery places."

"I hope not, brother Burroughs," said I.

"Is not the world getting to be a delight to your eyes, and a snare to your footsteps?"

I thought it was not quite right to pretend that I did not know what he was aiming at, and so I spoke out: "If you are referring to our Monday's ride, I confess that the green fields, and the birds, and the honeysuckles were a delight to my eyes."

"The green fields are at work, sister Mincey, doing their duty in bearing food for man and beast, and the birds and honeysuckles are as God made them, and, no doubt, useful in various ways; but what good or useful service was accomplished by such a frolic as that of last Monday? Is it not rather giving occasion to the enemy, when a set of professing young men and women go pleasure-riding over the country, and end up with a carouse in a Lutherville tavern?"

This speech made me angry, and I answered: "Now, you know, brother Burroughs, just as well as I know it, that we went on no carouse. You know all the young folks in the party, and that there are

no steadier persons to be found in the church, and you know that Luke Johns is a good Methodist, and keeps an orderly, temperance public-house."

"I was hasty in my speech, Sister Mincey. I was looking at it rather through the eyes of the world than through my own. The circuit-rider down there does speak well of brother Johns, and I believe that you had no evil intention, and behaved in an orderly and becoming manner; but worldly people will not so regard it, as you know. They will think it a party,—for aught we know it may be reported that you danced,—but even for this I do not care so much as for the influence it will have on the young people in the church. We look upon you as a leader among them, and that is why I have come to you alone upon the matter. Young brother Burt is a chosen vessel, and he must not be led aside from his high calling."

"I didn't ask him to take me riding; you may be sure of that!" I retorted.

Brother Burroughs's thin lips opened a little crack in what was as near a smile as he could manage. "I am sure," he said, "that you will not do anything unbecoming in a well-behaved woman; I only meant that your influence over the young people in the church is unbounded. With them, whatever Mary Mincey does is right. It behooves you, then, to walk circumspectly and not to do anything that will cause your weak brother or sister to offend."

As I look back now, I can see that spiritual pride was the weak point in my Christian armor. I was looked up to, as brother Burroughs had said, and I knew it, and was proud of my standing in the church and my character for piety, and so, you see, brother Burroughs's last dart touched me. But the Spirit seems sometimes to turn our very faults into helps to goodness; and the fear of losing my place in the estimation of pious people set me to thinking whether the ride was not, after all, a piece of worldliness. It was undertaken with no object whatever except our own gratification; and I thought with shame that, on that day, I might as well have been one of the birds that I had watched skimming over the honeysuckles for all the seriousness that had been in me. I did not think we had done anything actually sinful, but we had, perhaps, trod the edge of the flowery path that leads away from the Heavenly Home.

So I felt kindly to brother Burroughs, and thanked him for coming to see me privately, instead of bringing the matter before the

church, as he might have done; and I told him I would think over what he had said.

Would they have turned us out of the church? Oh, no, but we would have been reprimanded, and the matter would have been talked about all over the town, and that would have been disagreeable.

Well, that really was the last of our ride; but one thing leads on to another in this life in a way we don't see at the time, but it is all clear enough to us when our memories travel back and take up the stitches.

I am sure now that it was this conversation about the ride that made me take to heart a piece of gossip of Martha Hays. She came to my house one day for no other reason, I am sure, but the pleasure of telling it to me; for a bit of scandal was to Martha meat and drink, and pretty good lodging besides. Generally I paid no manner of heed to what she said, for her talk was no more worth minding than the tinkle of a cow-bell. But my conscience wasn't easy under brother Burroughs's words, and I had been questioning with myself whether I had been careful to keep my lamp trimmed and burning in the last few months. So when Martha told me that the whole church (she never used small measures) was talking about Mary Mincey, and how hard she was striving to make Richard Gardiner wait on her, even making a point of going out of evening meeting, in the face of the whole congregation, before it was time to close, in order to oblige Richard to go home with her—so, when Martha told me this, I was not angry as I might have been at another time. But I did feel hurt that they should bring up against me the fact of my sometimes coming early out of meeting, for they all knew the reason as well as I did, and that it was a great cross to me, as I had explained in class on several occasions.

The reason was this: The family which gave me the most work and the best pay lived a long mile from our church. They were excellent people, but had peculiar notions, and one was that the house must be locked up at nine o'clock at night, whatever might happen; so when I was engaged there, working by the week, I was obliged to leave evening meeting before it closed; and, just as surely as I rose from my seat on the women's side of the church, Richard Gardiner rose from his on the men's side, and, following me out, walked with me to the house. I had never objected to his going, as it seemed natural enough, intimate as we were, but I did not need his protection, for

there was not the slightest danger and I was not afraid.

As for giving up the place, that was not to be thought of. My regular wages, when I went out to work, were seventy-five cents a day, or three dollars a week, but I did a good deal of fine, nice work for the Brewer family, and they paid me extra for it, sometimes as high as six dollars a week. This was an object to me, as you may know, with a house on my hands and Aunt Carr's family to look after. I could not give up the place, but I could prevent Richard from going there with me. And this I resolved to do, not so much on account of the gossip, for this would die away after a while, but for my own sake. For Martha's words had given forms to the shadows of ideas that had lately been troubling me, and I saw at once that the truth of the matter had been that I had allowed myself to be too much influenced by Richard. It was difficult not to be influenced by Richard. Somehow he carried you along with him when he talked, until you didn't know exactly where you stood. He was a good young man,—morally good, I mean,—and upright and honorable. He would not knowingly do wrong, or lead others to do it, but he was high-spirited and worldly-minded. I could see now how worldly our talk had generally been, and how he had caused me to look on the things of time as if they were to be compared with the things of eternity.

Who was Richard Gardiner? The only child of Paul Gardiner, who had kept the largest store in Trego. His father had died a couple of years before this time, and had left Richard his business, so that he was better off than most of the young men. It was a Methodist family, and Richard had been piously brought up, and attended all the meetings, except class, as regularly as Edmund and I. He had the deepest respect for religion, and I believe had honestly tried to secure it for himself, but, up to this time, he had not found saving grace, though he had been several times up to the anxious bench, and twice, I know, had been under deep conviction. Harvest after harvest had been gathered into our church, but Richard was always left outside. And so good as he was, too! Sometimes I used to think if he had only been worse, there had been a better chance for his getting through and expressing an assured hope. He and Edmund were intimate friends, and were so like brothers to me that I never felt the want of a brother, though I often wished for a sister. In any trouble I appealed to one or the

other indifferently, and consulted them about my plans, and they were always thoughtful for me. There seemed to be an agreement between them, that if one could not attend to me the other would. Richard always went with me when I left meeting early, because Edmund was needed to lead in the prayers and the singing.

It happened that I was engaged to go to the Brewers' the Monday after I had heard Martha's story, and on my way out I stopped at Richard's store to get sewing-silk and linings. I had a little note for him tucked under my glove, for I knew there would be people in the store to prevent my saying what I had on my mind. So I wrote a few lines, just asking him as a favor not to go home with me from the Tuesday night prayer-meeting, and that I had a good reason I could not tell him then.

He had just got in a lot of spring goods, and he showed me a case full of beautiful ribbons. You talk now, my dear, about the wonderful tints in greens, as if there had never been any like them, but they had just such sixty years ago in dress goods and ribbons—lovely changeable greens, with browns and yellows and whites all blending into one another.

"I have picked out a ribbon for your bonnet, Mary," said Richard, as he took a roll out of the case; "I thought of you the moment I saw it."

He unrolled it and tossed it out of his hand, and it fluttered down on the heap of dark cambric he had been cutting off for me, which furnished a background to bring out the green tint—just the color of young sage-leaves.

"It is lovely, Richard," I said, "but too gay for me."

"Why, it is not gay at all," he said, "it is very pale in color, and this delicate green will suit your pink cheeks."

He whispered this as he bent over to gather up the ribbon, which he let float slowly out of his hand into a stronger light, where it looked as if moonshine were running up and down it.

I shook my head. "It is entirely too bright," I said, rather regretfully, I am afraid.

Then he gathered some of it up in a heap and threw it softly down right into the sunlight that fell on the counter; and there it showed a pale, pearl-gray, with just the slightest suspicion of green; and it looked so plain-colored I thought it really might suit me, so I told him to cut me off two yards.

I kept a scrap of this ribbon for a long time, but it is lost now. It was heavy Mantua ribbon, but Richard let me have it at the wholesale price, sixty cents a yard. I never allowed him to give me anything out of the store, but he would not let me pay more than wholesale price.

When he handed me the package I managed to slip the note into his hand; and I went to the prayer-meeting Tuesday night thinking how strange it would be to take the walk back to Mr. Brewer's alone. I was quite nervous when it was time to return. The congregation were singing "The year of Jubilee," I remember, as I stepped out of the pew into the aisle. At that moment I saw a black figure looming up on the other side of the church, and as I walked down one aisle Richard walked down the other.

"I told you not to do this," I said, turning on him sharply, as soon as we were outside.

"I shall not let you take that long walk alone," he said, "if all the busy tongues in the church wag at us."

So he had heard the gossip too, and did not care for it. I was secretly so much pleased that he should, as it were, set all the church at defiance for my sake that I did not give him the scolding I intended. "And, after all," I thought, "his coming out of church with me was less noticeable than his staying in would have been." You see I had completely lost sight of the deeper reason I had had for requesting him not to go with me.

So I only said, "There is not the smallest danger." And then I slipped my hand into his arm, and we walked off as usual.

But we had a very unusual conversation, for Richard told me that he loved me, and asked me to be his wife. I was startled, almost frightened, for he was very vehement, and my brain was in a whirl with the new thoughts he had put in it. I had sometimes wondered if I ever would have an offer of marriage, and who would make it, and perhaps it is strange that I had never thought of the two young men who were most attentive to me. But their attentions had always been so brotherly, and I had known them so long.

I did not ask myself now if I loved him, it seemed such a strange thing that he should love me. That was all I could think of. Richard kept talking on, trying to win a word from me. Scripture sentences always came readily to my mind, and I finally murmured, more to myself than to him, "Be not unequally yoked with unbelievers."

But he caught the words: "I was afraid that would be your feeling, Mary," he said. "I will not argue the point with you now, or quote other Bible phrases, such as the unbelieving husband being won by the conversation of the wife; but I am sure that, at some other time, I can convince you that my not being a professor of religion should not stand between us. All that I want to know now is if you love me. Love is the best thing in this world, dearest, and your words give me hope, for, if you did not care for me a little you would not have thought of any barrier there might be between us."

I did love Richard; I had always loved him. But the kind of love he was now asking for I knew nothing about. I could not have told whether I loved him in that way or not, if my life had depended upon it. But, turning aside from any spiritual view of the matter, and looking at it only in the worldly light in which he wished me to, I found a barrier there also. Something did stand between us even then. It was Edmund Burt. It seemed almost as if I was looking into his eyes, and that they were telling me that any word of love I might say to Richard would be a sore hurt to Edmund. And yet, I could not hurt Richard. So I thought it best to speak out frankly part of what was in my heart.

"I have always looked upon you, you know, Richard, as a sort of brother, and I cannot think of you in this way all at once—it startles me so."

My voice trembled, I expect, for I was near crying, and Richard said, soothingly:

"Never mind, dear Mary, there is plenty of time. Don't worry over what I have said. Let everything be as it was between us. I wanted to let you know my feelings towards you; and some time you will get to know your own heart better. I shall not trouble you with this subject again for a long time."

Richard meant well, and his words did sound comforting; but one can't coax a trouble out of sight, you know; and this, my first love affair, was a trouble to me for a long time. It was not the joyful thing I had imagined a love affair to be. I had not taken into account that in everything there is a conflict between right and wrong. They tell me that now it is the doctrine that in all such matters the feelings are the safest guides. How can this be true if "the heart is deceitful above all things, and desperately wicked?" And yet, perhaps God does lead us sometimes by our feelings alone. I don't know how this may be, but no such doctrine was held among those with whom I was brought

up. We were never to forget that we had our salvation to work out "with fear and trembling;" that our duty to God was the first consideration in everything; and that we must bring every earthly matter to His footstool and seek His guidance. This was the faith in which I tried to walk; and, if I failed to do what was right, I can't help thinking that the fault must have lain somewhere else than in the old faith.

That was Tuesday night. When Sunday came, bright and clear, I dressed myself for church, all in new attire. I wore a puce-colored Levantine, for which I had paid a dollar and a half a yard, but it only took eight yards to make a dress, and a good Levantine lasted for years. It was plainly made, without trimmings, and with narrow lace ruffles in the neck and sleeves. I had a plain silk parasol to match the dress, white silk gloves, and white silk stockings, and black kid slippers. All this, though new, was in my usual style, but in my bonnet I made a change. I was tired of the straight, white, untrimmed shirred silk bonnets I had worn every summer for years and years; and so, that season, I had given seven dollars for an English Dunstable, double straw. This was a high price, but I knew I could wear it for several summers, with bleaching and doing up. It was made in the straight Methodist fashion, and my beautiful delicate ribbon was laid across it in a fold and tied under the chin in a bow. Around the face was a narrow quilling of bobbinet lace.

Richard overtook me on my way to church, and, for the first time in my life, I was embarrassed in his presence. But he talked as easily as if nothing unusual had passed between us, praised my taste in dress, and told me the ribbon was very becoming. This was not proper conversation for the Sabbath, but my mind was so unsettled that I did not think much about what was said, though it came to me plainly enough soon after.

The very next Saturday night it was. I recollect it, because it was class night, and Edmund went home with me and sat with me a while in my little parlor. All these things are as clear to me as if they had just happened. I remember well that little parlor in the feeble light of the oil lamp, with Edmund and I sitting near the open window, and the scent of the climbing roses coming in through the slatted blinds. Edmund had been very quiet during our walk, and it was evident to me that he had something weighty on his mind, and, at last, out it came.

"Sister Mincey," he began (and then I

knew it was something about religious matters, for when we talked of other subjects he always called me Mary), "did your conscience bear you witness in decking yourself out in the gay apparel of last Sunday?"

No one could ever get really angry with Edmund. He had such a tender way of saying things, as if the love of the Lord Jesus constrained him, as indeed it did in everything; but my temper was a little touched that he should find fault with what I had thought a very simple dress, and I asked him in rather an acid manner what part of my clothing he had thought gay?

"You have been an example to the young women, sister Mincey, in plain and modest dress, and I was very much surprised last Sunday to see you with such a flaunting ribbon on your bonnet."

I felt it was unjust to call my delicate sage-green "flaunting," and it did not please me just then to be considered an "example."

"The ribbon was the least costly part of my dress," I said, "and green seems to me a very good color that the Lord has scattered around pretty plentifully."

Edmund thought a moment before he replied: "Certainly we ought not to spend much money upon clothing, but serviceable wear must be taken into account in purchasing, and your judgment is good in such matters. I can only speak of the effect, and to my eyes all your dress except the gay ribbon was such as was seemly for a professing Christian. The ribbon may, possibly, do you no harm; but you have great influence over the girls, and one will say, if sister Mincey wears a gay ribbon, I may too; and another will pin a bow on her bonnet, and another may even go so far as to stick a bunch of flowers on hers. This is why the sight was grievous to me, and I thought I ought to speak to you about it."

Not one word in regard to its effects on my looks! I recalled then what Richard had said about it, and I was provoked into mentioning it:

"Richard persuaded me to buy that ribbon, and he says I have never worn anything so becoming—that it exactly suits my complexion. But I suppose *you* never noticed *that*."

"No," he said, "I never noticed it. I only thought of its effect on the souls of those around us, and your own soul too, sister Mincey, for even those who feel that they are sanctified must not be too sure of not becoming castaways."

Edmund referred here to a belief we both held, and had often talked over. I know

many good people do not subscribe to it; but it has always seemed to me that the good God would not leave his people to grope along this puzzling world without an assurance of being accepted, and through life this has been my comfort and my stay; and I believed then, and still think, that those who never feel that they are really God's saints cannot be perfectly happy in their religion.

We fell into a long silence. I thought over all that Edmund had said, and then my mind wandered off to Richard, and to that conversation we had had after evening meeting, and then it came back to Edmund as I remembered how he had seemed to stand between Richard and me. I had forgotten he was there near me, and was quite startled when he spoke.

"Forgive me, Mary," he said, "if, in doing what I felt to be my duty, I have offended you. I would not hurt your feelings for the world, but a soul is more precious than the world. And you are every way precious to me, Mary. I have been wanting for a long time to tell you how precious, but have lacked the courage, for I saw you only cared for me as a friend—a brother, it may be—and for four years I have been looking forward to the time when you would perhaps consent to be my wife. There is nothing earthly I have longed for as I long for this. I know that this is unexpected to you, and I will not press you for an answer until you are ready to give it."

This was not unexpected to me. It would have been so, two weeks earlier; but, when Richard spoke to me in that way, I seemed to hear Edmund's voice also, and I felt assured then that Edmund loved me, and that, sooner or later, he would tell me so. With the memory of Richard's ardor and vehemence fresh in my mind Edmund seemed cold and contained, but I knew he loved me as truly. He spoke in that way because his feelings were tempered by the deepest conscientiousness. I felt that he was very dear to me, but was he as dear as Richard? And just as Edmund had stood between Richard and me, so now Richard stood between Edmund and me.

As soon as I could collect my thoughts, I said: "Edmund, I don't believe I love you in the way you would like me to, but I am not quite sure; and perhaps you will despise me when I tell you that a few days ago Richard asked me to be his wife, and I gave him the same answer. I can't say to either of you yes or no."

What a stillness there was in that little

room for a minute, and I grew frightened, and Edmund's voice seemed to come to me from a long distance! "What did Richard say?" he asked.

"He told me to take time to think about it."

"I have known what Richard's feelings have been for you, Mary, though not a word has passed between us on the subject, and I think he understands me perfectly. I am anxious for his happiness, as I believe him to be for mine. And here there will be no hatred between us, whatever may happen. We will be just to each other, but it is your happiness, not ours, that you are to consider. Put out of your mind all thought of what the consequences may be to either of us, and consult your own heart, and ask the Lord for guidance to do, in this matter, what will be best for you in this world and that which is to come. Why should I despise you for not being able to choose at once between such old friends? I repeat Richard's words, dear Mary, take time to think about it."

It was impossible to follow Edmund's advice. How could I put out of my mind all thought of the consequences to them? Next to our profession of religion it was the most important decision we had ever been called upon to make, and I felt it would decide the future of all three for time and for eternity. And this great responsibility, you see, rested upon me alone. They both resumed their old brotherly ways, but the old feeling never came back to us. Edmund was as good as his word, and left me in peace to think and to pray; but Richard kept forgetting what he had said, and he worried me a good deal to try to find out exactly how I felt towards him, and then he would blame himself severely for troubling me.

I would have given a good deal at that time to have been able to know exactly which of these men I loved the best. When I was with Edmund, I liked Richard's ardent, eager manner; and when I was with Richard, there seemed to me nothing in all the world so pleasant as Edmund's quiet, gentle ways. Sometimes I thought I did not love either of them, and that I would tell them so and end the matter. But I could not bear to give either of them up. And, after all, this question did not trouble me as much as the other far more important one, which one *ought* I to love the best? Edmund was good and true, but so was Richard. He was so true that he never said to me: "I will try to be religious for your sake, and will you have me if I join the church?"

Had he said this, my doubts would have come to a sudden end, for I could never have married a man who made the mercy-seat a stepping-stone to the marriage-altar. Edmund was already in the fold, and from him I would have every help towards growing in grace, and it seemed right that those who loved to serve the Lord should be mated together. But there was much to be said on the other side, for Edmund's spiritual nature needed nothing from me. He would stand steadfast through everything, whereas it might be that the very salvation of Richard's soul depended upon me. As his wife I would have to struggle against worldliness and vanity; but I had a more assured hope than many, and perhaps it had been granted me for this very purpose. My mind was tossed first on one side and then on the other.

As I had told Edmund what passed between Richard and me, I thought it only right to tell Richard of the interview I had had with Edmund. He was less generous than Edmund, for he said:

"Edmund is far better than I am, Mary, but he can never love you half so well. It is not in his nature to love as I do. But I see," he added, looking at my straw bonnet, which I happened to have on at the time, "that you have already gone far towards making a decision, as you wear a ribbon of his choosing rather than mine."

[I had taken off the gay ribbon and replaced it with strings of white lustring.]

"That signifies nothing," I replied, "except that in spiritual matters I consider Edmund's judgment better than yours."

I have tried to give you some idea of the thoughts that toiled through my mind day after day, but I know I have failed. We realize the workings of our own consciences, but we can't describe them to others. My mind was more absorbed in this subject than it ever could have been in gay ribbons or riding parties. I could not read my Bible with singleness of heart. Thoughts of Edmund or Richard intruded into my private prayers; and as for the seasons of refreshment in the Sabbath services and prayer-meetings, when my soul used to glow as I poured out my pleadings that all might be led or kept in perfect peace, they were gone utterly. I was accounted to have a gift in prayer, and even at this time I never refused when our preacher called on me to lead in prayer, but I would feel afterwards that I ought to have refused, for my heart was not in it.

We were at war with England at that time

—in 1813—but I didn't know much that was going on, I was so occupied with my own warfare; and none of the Methodist young men of Trego had gone into the army then, though some did afterwards.

A malignant fever broke out in Luther-ville, and made short work with the drunken men and poorly fed women and children of that place. There were not enough well people to take care of the sick, and nurses could not be got to go there. Trego people got frightened, and no communication was allowed between the two places. This, being so near home, did rouse me a little out of myself, but still I did not give much thought to it.

This was the middle of July, and the weather was very hot. One afternoon, oppressed with the heat and my burden of perplexities, I threw aside my sewing, and, putting on my sun-bonnet, left my work-room and took a walk along the bank of the river, beyond the houses. As I was thinking that, in some way, I must end the strife in my mind, even if it should be by giving up both Edmund and Richard, the latter came up with me, having seen me pass his store, and followed me out of the town. As if he had divined my thoughts and was answering them, he urged me to decide one way or the other, assuring me that he could give me up to Edmund if I felt that I loved him best and would be happiest with him.

This was the first time he had ever hinted at the possibility of my marrying Edmund, and I began to think that perhaps this would not be to him the terrible blow I had feared, and that it might help me towards seeing the right way. But when I said, "I know Edmund could not fail to make me happy, but that is not—" he interrupted me, and contradicted himself by declaring in the most positive manner that I would never be happy with Edmund, for I only felt drawn towards him from a sense of duty, and that he could not give me up at all.

I knew it was not true that I loved Edmund from a sense of duty; but then came my moment of great weakness. I have told you that when I was with Richard I felt I loved Edmund best, and when I was with Edmund that Richard was dearest to me; but now my heart went out towards the one who was near me. Just then he seemed to me of very great price, and when I looked into his dear eyes, soft and shining with love, I was about to yield and say, "Richard, take me," when it was as if something whispered to me: "Wait a moment!"

He never knew what passed through my mind in that moment. He stood silent, expectant. Everything was still. Then I lifted up my heart and prayed to God—not that he would help me and teach me in this thing (for that I had often prayed),—but that He would then vouchsafe me a sign by which His will should be made clear to me.

This prayer finished, I found Edmund at my side as if he had dropped from heaven.

He smiled, a little sadly, I thought, at my startled look, and said, "I have seen you two for some time, but you were not looking the way I came, and you were so absorbed in each other you did not hear my footsteps. I have come, Mary, to bid you good-bye."

Was I about to lose Edmund? My heart sank. "Where are you going?" I asked.

"To Lutherville."

"Oh, Edmund!" Richard cried out, "don't go there. It is like the Valley of Death!"

"That is the very reason I am going," said Edmund. "Think of the poor creatures perishing for want of the nursing I can give them, and of the precious souls perishing for lack of the bread of life."

"And we cannot hear from you," said Richard, deeply moved, "or know whether you are dead or alive!"

"No," said Edmund, solemnly, "we three will not meet again for many weeks—perhaps—not then."

Richard turned to me: "Mary, help me to persuade Edmund not to go."

I had not said a word. Here was the sign I had asked for. The Lord had granted my prayer. He had sent a messenger to call me to the work He had appointed me. I looked into Edmund's face, always winning, and now made noble by holy love, and, laying my hand on his arm, I said: "I will go with you."

Richard moved away. I did not dare to look at him, for fear I might falter. I kept my eyes on Edmund's face, my hand on his arm, and thus we stood for several minutes. When he drew me to him and kissed my lips, I knew that Richard had passed out of sight.

What do you say? Did Edmund accept this sacrifice? He had no right to refuse it. Did Abraham refuse when he was called upon to offer up his only child? The sacrifice was not to him, but to the Lord. Edmund was dear to me, and it was sweet to be with him anywhere. Life was sweet to me too, but I could give it up, if it was the Lord's pleasure. But Richard took the same

view of it that you do. He had a long interview with Edmund, trying to convince him that he was doing wrong in accepting from me the sacrifice of my life by thus taking me down into the pestilence; and Edmund replied, as I have to you, that I was not making the sacrifice to him but to the Lord. Then Richard sent a letter to me. He could not trust himself to see me, he wrote, but he begged me not to marry Edmund until after his return from Lutherville, or else to insist on his not going there at all.

I answered him that my mind was fully made up; that the Lord had called me, and, in calling me thus, had made it clear to me that I should cast in my lot with Edmund, and I ended by entreating that, if I lived, he would be to me the same dear brother he had always been.

This was my last communication with Richard Gardiner for forty years; for he returned me no answer to this note. And, indeed, there was but little time, for the work Edmund and I had to do could not wait for us, and on the third day after my decision was made, we were married.

It was not the fashion of those days to take wedding trips, for traveling was not the easy thing it is now. The bridal couple went at once to their own home. Gay people of the world gave large wedding parties, and the more serious-minded had, perhaps, a few teadrinkings. But Edmund and I did have a bridal trip. The iron-gray horse took us over the same road we had so gayly traveled two months before, by the green fields and through the spicy woods, down into the Valley of Death.

Neither of us caught the fever. We were wonderfully preserved and sustained in our labors for the bodies and souls of those poor people, but I shall never forget the fearful scenes of that pestilence. This terrible visitation was followed by a great revival of religion, and a harvest of souls was gathered into the church. We were not the only ones moved to go there and nurse the sick. We had been soon joined by a few pious men and women.

When we returned to Trego in the autumn Richard was gone. He had removed to this city and opened here a dry-goods store. A few years after, Edmund set up in business here; but by that time Richard had drifted entirely away from us into another religious denomination, then into fashionable society, and then into public life. We used to talk of him sometimes; we would have

welcomed him gladly to our home, but he never sought us, and there was nothing to cause us to meet. He married, and I used to wonder if his wife made him happy. It is hard for us to believe that the life of any one who has been so near to us can be quite complete without us. I forget how it was exactly, but I think she did not live many years.

I was happy in the love of husband and children. We were prosperous. We had enough to make us comfortable, to educate our children; and to give away. The children all grew up to be good men and women, and I was content, and never regretted the choice I had made on that July afternoon in 1813. But one may have no regrets and yet not be at perfect peace. My life was too busy for much thinking of the past, but there were times—perhaps you can't understand—I don't want to give a false impression—but when I was nigh on to sixty years, I could not fully answer the questions that had troubled me that summer of 1813—which did I then love the best, Edmund or Richard?—which ought I to have married? There were times when I questioned whether I should have been so *very* sure that the Lord gave me a sign that day. Had not Richard needed me more than Edmund, who would have firmly walked heavenward without any earthly support? Had I not made Richard's life, such as it was, full of worldly cares and empty of everything else? Was I not the one person in the world who could have made his life fuller and better?

I think now—indeed, I may say I know—that these were vain imaginings, and that I loved Edmund best, first, and always, and that it is likely I could not have influenced Richard's life as I then fancied I could. But there were times, now and then, when the calm happiness in which my life glided along seemed a stagnant pool to me, and when I was troubled with misgivings that the Lord had made me strong in the days of my youth to fit me for other and stormier scenes. You see, my dear, I know from experience that "the heart is deceitful above all things, and desperately wicked."

Edmund died at sixty-three. We were old people then, I thought, and that was twenty years ago!

It was about a year after this that I met Richard, and spoke the first words I had uttered to him since that time I had turned to say to him, "Richard, take me." It was a chance meeting. In a case of charity, in which I was interested, I was directed to the office of the president of a benevolent institution, and

there I found Richard. My dear, he did not know me! But when I told him who I was his face lighted up with pleasure, and we had a long talk, chiefly about Edmund. After awhile we took up the old days at Trego, but not a word was said about the summer of 1813.

The Honorable Richard Gardiner was a handsome old gentleman, courtly and affable; but I realized then that there was no real sympathy between him and me. And then, for the first time, was I fully satisfied that I had not loved this man. Since then my mind has been at perfect peace.

Except once. Nine years ago Richard died. It was late in the fall, when I could not go out; but I knew that his cemetery lot was on the river bank, not far from ours. Often, during that winter, I thought of the two old friends once more brought near together; but it was not until early summer that I was well enough to visit the two graves. My son James was in the habit of driving me out to Edmund's grave frequently during the summer, and we always took some of the children with us, and heaps of flowers. I was

glad the honeysuckles were not all out of bloom when I went, for I liked to lay some on Edmund's grave every year. But the roses had always seemed to me to be Richard's flowers; and this day, while the children were tying wreaths, I slipped a bunch of roses under my shawl, and stole away to lay them on Richard's grave.

But there was no grave at all—nothing but a lonely marble tomb with pillars, and arches, and statues;—and when I looked back to the grassy mound under which Edmund was sleeping, with the scent of flowers, and the sweet voices of children floating around him; for a few minutes the old doubt came creeping back into my heart, and I wondered if my hand had raised this cold, hard shell between Richard and all that was tender and sweet in the world.

I am a foolish old woman to cry now out of sheer pity for him who, perhaps, never needed my pity.

There was no place there for my roses, and I would not put Richard's flowers on Edmund's grave, and so I laid them gently in the river.

A VISIT TO PIUS IX.

MONSIGNOR RICCI, an officer of the Pope's Palace, whom I had begged to have the kindness to present me to the Holy Father, informed me beforehand by note that on the morrow, at eleven o'clock, His Holiness was graciously willing to receive me at the Vatican in the company of a prelate, a friend of mine, who belonged to the court. Our carriage conveyed us by the rear of the apsis of the basilica of Saint Peter's into the courtyard of San Damaso, where we descended.

The Pontifical gendarmes,—Pius the Ninth has retained one hundred gendarmes, as many halberdiers, who, together with twenty soldiers of the engineers turned into firemen, and sixty of the guard of nobles, preserve the independence of the Holy See,—the gendarmes on guard at the gate of the courtyard present arms to us. I say "us;" but it is the prelate to whom this honor is tendered. We bow; a domestic opens the scala of white marble, the easy flight of which leads up to the pontifical apartment. On the first landing-place a Swiss in shoes with buckles, stockings striped longitudinally with yellow, canary, and black, in a jacket variegated with black,

yellow, and red bands, helmet on head, halberd in hand, paces stiffly to and fro with measured steps. He perceives the violet mantle of my companion and suddenly stops motionless. The blow of a halberd resounds on the slabs; one hears it strike and rebound in majestic waves along the brick-colored marble walls, and the window-panes tremble in their leaden frames. The prelate gives his benediction to the guard; I raise my hat. At the second landing another Swiss, another thud of halberd, a second blessing, a new bow. The same ceremony is repeated at the third stair-head and we enter the guard-room. At the further end and opposite the door six Swiss are drawn up in line. One might suppose them knaves taken from six packs of cards. Six halberds slide through their hands and fall with a crash on the mosaic at sight of the prelatical insignia; then the blessing and raising of hat together. Two lackeys of the Holy Father, in red stockings, short hose and doublet with false sleeves of crimson Utrecht velvet, bow deeply and kiss the prelate's hand; I give them my hat, and they usher us into a vast

ante-chamber, which we cross at their heels. They raise a door-curtain which opens upon the first pontifical drawing-room, and retire backwards with many reverences.

Four drawing-rooms follow each other, vacant; on the ceilings are frescoes painted; the walls are hung with woolen tapestries or adorned with panels of various kinds which form the frames for canvas. Some of these frescoes, tapestries and canvases, which represent events in the life of Christ or in church history, are very fine. There are no other decorations; a carpet on the wooden floor, as is customary at Rome in winter; some stools of waxed oak; a copper *braser*, a gilded bracket with twisted legs and medallions, propping a crucifix, are the only furniture of the pontifical drawing-rooms.

The third room to which we come is in the same style, only beneath its canopy is seen a red velvet arm-chair of wood and with gilt fringe. It is the throne of the pontiff. A group of some ten prelates in violet cloaks talk together in a low voice. Four Franciscans, clad in a coarse stuff, draw themselves humbly away behind the marble uprights near the door; they cross their hands in their woolen sleeves, the edges of which partly hide a rosary of large beads; their eyes cast down in meditation brighten their venerable beards, which spread out their silver threads upon the breast; their bare feet are coarse and reddened by the air. They seem embarrassed at finding themselves at court. In the recess of a window a Camaldule in a white woolen robe reads his breviary. Near him the Capuchin Archbishop of Iconium, Monsignor Luigi Puecher Passavalli, who made the opening speech at the last council, is engaged in a political discussion with three Roman nobles in frock-coats. He is a sturdy prelate, white of beard, gray and quick of eye, open of countenance. His violet skull-cap and his silken mantle of the color of dead leaves lend something severely theatrical to his monastic costume. A poor old Sabine curé hides his confusion in the twilight cast by these princes of the Church. His eyes are moist, a shiver makes his bowed shoulders tremble under a cloak of honor, doubtless the same which he put on the day of his taking orders; its material has turned a greener shade than the thatch of his parsonage. Like the aged Simeon coming to salute the child of Bethlehem, he has come down from his mountain to be blessed by the Holy Father.

Through the windows the magnificent hills of Rome appear, entirely covered with their

buildings, and stretch away in waves at the foot of the Vatican; the cupolas seem to prostrate themselves before the palace of the pontiff. One might suppose it all a show arranged for his eyes. Not far off, at the end of the open gallery of John XXIII., the cross of Savoy floats on Fort Saint Angelo in place of the gold and purple flag of the Church,—gold and silver since the days of Pius VII.

Piedmont trumpets are heard on the bank of the castle moats, and they send their mocking blare to the pontifical throne itself. Suddenly the cannon roars. It is the signal for mid-day, the royal troops having preserved this ancient custom.

At this moment a cardinal, followed by two domestic prelates, enters and disappears by a door which leads to the private apartment of the Pope. His entrance causes a stir which brings me near to the Archbishop of Iconium; Monsignor Ricci presents me to him, and the archbishop asks for news of Mgr. Dupont, Bishop of Azoth, who left Siam, where he had lived thirty years, to assist at the Ecumenical Council of 1869.

The little door which opened just now opens again. Two officers of the old pontifical army advance slowly; they are of noble family, to judge by their distinguished bearing. After them come two chamberlains, bearing the one the papal hat, purple, with gold tassels, the other a breviary, and take their places beneath the principal doorway.

The Pope enters the throne-hall.

Behind him march the cardinals Berardi and Guidi, Mgr. Pacca, Mgr. Ricci and a few prelates of his house.

All present put one knee to the ground.

This old man, entirely clad in white, white of hair, with blanching wrinkles on his face, as if the blood had departed, inspires you immediately with a very great respect. One might say it was an apparition of a phantom of snow. His girdle of white moire glitters on the background of his robe, like a blade of ice. The gold chain which he wears on his neck, his red slippers, and his glance still bright, throw a mysterious splendor on that whiteness. His body has remained strong; he has resisted his eighty winters. His step is easy; his face of an exceeding gentleness, noble and mobile, has preserved a beam of youthfulness. His forehead is burdened less than usual with cares; last Sunday his little niece, Mme. la Comtesse Maria-Pia Mastai-Ferretti, took the veil of the Oblates at the convent of Tor di Specchi. That religious festival made his heart young again.

Pio Nono in his left hand holds a letter be-

hind his back ; his right blesses the persons who happen to be on his way. He first speaks a few words to a cardinal, then to one of the three persons in frock-coats, then to the Archbishop of Iconium, with whom he converses for a moment. I am at the side of Mgr. Passavalli ; Mgr. Ricci, who had the goodness to announce me to the Holy Father a little before, gives my name.

"Ah, you then are the former General-in-chief of the forces of the Kingdom of Siam?"

"Yes, Most Holy Father."

"I was very sincerely afflicted by the death of the King of Siam, whom I loved because of the protection he afforded to the Catholic missionaries. Has his successor the same sentiments?"

"Yes, Most Holy Father, Prince Maha Chulalon Korn follows in the steps of his illustrious father."

The Pope asked one of his chamberlains for the King of Siam's letter written in September, 1852, and which was presented to him by two young Siamese under the guidance of Mgr. Pallegoix, Bishop of Mallos, and Apostolical Vicar of Siam.

Here is a passage from that curious letter, which, in accordance with the epistolary custom of Soudetich-Phra-Paramendr-Maha-Mongkut, is a very long one :

"I am not yet a believer in Christ ; I am a pious follower of Buddhism ; but I only hold to the philosophy of that religion, which has been disfigured by fables so monstrous and absurd that it seems to me it will soon disappear from the world. Your Holiness may be fully persuaded that in my reign there will be no persecutions of Christians, and that the Roman Catholics, especially protected, shall never be employed in any superstitious rite contrary to their religion, which matters I have charged the Bishop of Mallos to explain to your Holiness."

"And he keeps his promise, does he not, General?"

"Perfectly, Most Holy Father."

"So much the better, for I am not disquieted in that direction. Would to God that as much could be said of other parts of the earth ! Shall you stay long in Rome?"

"Not as long as I could wish, Most Holy Father. I shall pass but a few weeks here."

"Nevertheless there is much to be learned for men who are interested in politics."

"Very true, Most Holy Father ; but your Holiness knows that in this world one never does what one wishes."

"Have you still your family?"

"That happiness has gone, Holy Father. I lost them all in the French war."

He gives me his benediction, and then turns toward a prelate who hands him a petition. Cardinal Berardi puts on his shoulders a purple mantle, bordered all about with cloth of gold. Pio Nono takes the head of the procession, stopping now and then and speaking a few graceful words. We follow him across the four drawing-rooms which we had already passed through. We cut diagonally the vestibule of the crimson lackeys and in his train reach a grand drawing-room where fifty persons are ranged along the walls. The ladies are in black with false mantillas. The Holy Father makes the circuit of the whole room, says a word to each stranger, stops for five minutes near an ancient lady, who bursts into tears and crouches upon the ground, so profound is her emotion. Sobs choke her voice ; she has difficulty in making herself understood. Pio Nono consoles her in a truly paternal manner. Then he addresses a few words in a firm voice and in French to the persons gathered about him. We kneel ; he gives his general benediction and goes out by the vestibule, followed by his court, passes the guard-room, where the Swiss present arms to him on their knees, and proceeds to take his promenade in the library, the weather being too uncertain to descend into the gardens of the Vatican.

Every day this ceremony is repeated.

Pius the Ninth rises at six in the morning, alone and without aid from a chamberlain, in spite of his extreme old age. Having performed his meditation, he rings for his chamberlain, who watches in a room adjoining his, and proceeds to read his mass in the pontifical chapel, assisted by his Grand Almoner, Mgr. de Meroode, Archbishop of Mitylene, and his sacristan, Mgr. Marinelle, Archbishop of Porphyry. A quarter of an hour later he takes a light meal, receives Cardinal Antonelli, opens his letters, gives audiences. At half-past eleven or at mid-day his promenade begins. At two o'clock he dines, eating little and drinking Bordeaux wine, which the sisterhood of St. Joseph of Bordeaux send him. He rests himself until about four on an extension chair. Then he receives the cardinals, the religious orders ; studies the matters submitted to him. At seven the official receptions are opened until nine o'clock ; he goes to bed at half-past ten or eleven o'clock. He no longer leaves the Vatican ; this impressionable pontiff, who used to love the acclamations of the populace, wears mourning

in his palace. At Rome there are no longer either religious fêtes or pontifical.

The Pope is said to be kind and tender, but a man of impressions. Rarely does he turn back from a first emotion; men and things please him or displease him at first sight, and preserve in his eyes their agreeable or disagreeable physiognomy. This sponta-

neity of resolve, which proceeds from a great delicacy of the perceptive faculties, renders him a person moulded with difficulty. In truth, the great art of Cardinal Antonelli, by which he has preserved the favor of the sovereign through a long reign of twenty-seven years, has been to discover his faintest thoughts and to conform himself to them.

THE FIRST-BORN.

TREAD rev'rently, this is a holy place!
 A soul this moment here begins to be—
 A spirit born to live eternally:
 Speak low! commences here a human race;
 An infant-man, God's image on his face,
 In life's rough journey takes his first degree,
 Opens his eyes, ah! not the end to see,
 Only Omniscience all that path can trace.
 Softly in whispers; there a mother lies,
 The dew of youth upon her, yet so pale!
 She folds white hands, and looks, with upturned eyes,
 To her Deliverer, seen as through the veil
 Of this hour's weakness; still, her full heart tries
 For thankful utterance, though words may fail.

TOPICS OF THE TIME.

The Atlantic Disaster and its Lessons.

IT is a good time, after the first horror of the disaster to the steamship *Atlantic* has passed away, to consider and discuss, with calmness and candor, the question as to the responsibility for that wholesale sacrifice of the lives of innocent and trustful passengers. Where was the blame? We are not inclined to place it at the door of Capt. Williams' chart-room. It is no more than just to believe that he did the best he knew how to do. His own safety was involved with that of his passengers, and his action after the wreck showed that he considered his own life worth saving as well as that of his passengers. Was he considerably cautious under the circumstances in which he found himself? Probably not. Did he prove himself to be a good navigator? We think not. Would the ship have been lost in the hands of a man who understood the dangers of the coast, and thoroughly felt the tremendous responsibilities of his office? Possibly not—probably not. But who placed

Capt. Williams in command of the ship? Who but the same company that sent him out of port with a shamefully small supply of coal, and thus forced him into the circumstances which he proved himself to be incompetent to meet and master?

If Capt. Williams was an incompetent navigator, the fact must have been known to the company as well before as after the disaster. His life has not been hid under a bushel. He has commanded steamers sailing between New York and Liverpool for years. If there was anything in his character, habits or nautical education, which made him anything less than the best man possible for his place, the company knew it, or, if they did not know it, ought to have known it. Primarily, then, the company is responsible for every mistake that Capt. Williams made, and for everything culpable—if there was anything culpable—in his mismanagement. That he made great and awfully fatal mistakes, is evident enough, but we go no further than this in awarding blame to him. We are willing to believe that he did the best he

knew; but the question is: *Was the best he knew the best that was known?* If not—and we believe that the general conviction is that it was not—then we must hold the company responsible for placing him in a position of such tremendous responsibility. They are responsible for their commander; they are responsible for sending him to sea unprepared for the exigencies of the voyage; they are responsible for all the death and woe that have resulted from their course. If Capt. Williams was not the man for his place, he ought not to have been in it.

It is time that the American people, who furnish three-quarters of the fares of the finest lines, should know something of the dangers to which they are subjected by the foreign owners and commanders of the vessels which furnish the only means of transport to European shores. Tens of thousands of our best people are going back and forth every year on these lines. The world does not possess another line of ocean travel so freighted with life and treasure as this, or one which demands, from the interests involved, such faultless vessels and such thorough seamanship and high character on the part of those engaged in its management. We trust to these commanders our own lives, and the lives of our children and friends.

In these days, any sphere of industry commands the man it pays for. The world is so full of enterprise and the opportunities for wealth, that a cheap place, as a rule, can only get and retain a cheap man. One of the best captains afloat said the other day in our hearing: "A good man must either be hard up, or have a little money invested, to afford to be a captain in the Anglo-American service." The remark has moved us to make inquiry into the matter, and we find that the pay of a captain in this service is, on some lines, from £300 to £400 a year, with a bonus of £150 if no accidents occur, and on others from £300 to £500, without a bonus. In our money the salary of a captain is, therefore, from \$1,500 to \$2,500 a year. His board upon the ship is, of course, free. How do these wages appear to those who are compelled to trust their lives and their possessions to such men as can be hired by them? It ought to be stated, too, in this connection, that in the English-Australian Steamship service, the captains receive a thousand pounds a year—small wages enough, to be sure—but why is this difference made? Does any one doubt that the Australian line absolutely commands by its liberality the best seamanship in the market? Why should the lines that convey such multitudes of Americans in their cabins and such crowds in their steerage be subjected to this disadvantage? We know that there are, in the Anglo-American service, as good captains as there are in the world, but they are men who are forced to remain there by circumstances. How are their places to be made good when they retire? Are their wages such as to make their places a prize to be sought by the young men who are laying their plans of life? As a rule, these lines will get just what they pay for—that is, they

will get cheap men, and to these men all Americans who desire to visit Europe are obliged to trust their lives and their treasures.

The first officer in the Anglo-American service gets about £15, or \$75 a month, or \$900 a year—what we pay to an ordinary clerk. The second officer gets \$50 a month, or six hundred dollars a year; the third officer \$30 a month, and the fourth \$25. To men receiving these latter sums the Atlantic was committed when she plunged upon the rocks, with her priceless freight of human life. These sums correspond closely to what we pay our waiters and men of all work about the house, while they would not hire, in New York, a first-class waiter or a butler. The idea is horrible, but the facts are as we state them, or we have been misinformed by one who has the best opportunity of knowing them. What must generally be the class of men who can be hired at these wages? When this question is rationally answered, we can form some conception of the risks we are compelled to run by the parsimony of companies whose cabins we crowd with passengers, and who can hardly find room for the enormous freights which we commit to them?

We know of no way to secure a safer service but by holding the companies rendering it to a strict accountability. They are accountable for their ships, for their supplies, and for their commanders. If they wish for better captains—nay, if they wish to secure the best service of those they have—let those commanders hold a place whose wages are a prize worth holding, and make that place so high that young men of the best talents and character will look upon it as worth seeking. Let it be given to no man until it can be given as the reward of eminent character and eminent seamanship. As the facts stand to-day, we have no hesitation in saying that the niggardliness of these Anglo-American lines is a shame to their owners and managers, and that, until it is corrected, we have a perfect right to hold them criminally responsible for all the disasters that occur to them through the carelessness or ignorance of their employés.

Conscience and Courtesy in Criticism.

THE lack of sound value in current literary criticism, both in this country and Europe, is notorious. It is so much the work of cliques and schools, or so much the office of men who have a chronic habit of finding fault, or so coarse in its personalities, or so incompetent in its judgments through haste and insufficient examination, that it is rarely instructive either to the authors reviewed or to the public. The average column of book notices in a daily paper is quite valueless, by necessity. It is impossible that the reviewer read the books he is expected by the publisher to notice, and so he gives his crude and unconsidered dicta concerning them, going through his pile in a single morning, and helping to make or mar the reputation of their authors, apparently without dreaming how tender the interests are which he handles so carelessly. He seems to forget that all the influence of

the journal for which he works stands behind his hastily-written words, and that sensitive men and women are to be warmed or withered by them. Just a little more conscience, or a more candid consultation of such as he may have, would teach him that he has no moral right to give publicly an opinion of a book of which he knows nothing. In so small a matter as noticing a book before a competent examination of it, the chances are that he will mislead the public and do injustice to those who nearly always have some claim to the good opinion of the reading world. Publishers expect impossibilities of the daily press, and are largely responsible for what is known as the "book notice;" but the daily press ought to declare its independence, and absolutely refuse to notice any book which has not been thoroughly read. The best and richest of the city press has already done this; but the country press keeps up its column of book notices every week, written by editors who never have time to look beyond the preface.

In England, criticism is probably more the work of partisanship than it is here. The interests of parties in church and state, and of cliques and schools of literary art, seem to determine everything. It appears to be perfectly understood that everything written by the members of a certain clique will be condemned, and if possible killed, by the combined efforts of another clique, and *vice versa*. Criticism is simply a mode of fighting. Mr. Blank, belonging to a certain literary clique, writes a volume of verses and prints it. He sends advance copies to his friends, who write their laudations of it, and communicate them to sympathetic journals and magazines. So when it is published, the critiques appear almost simultaneously, and the public is captured by the stratagem. The condemnations come too late to kill the book, and the clever intriguers have their laugh over the result. It is not harsh to say that all criticism born of this spirit is not only intrinsically valueless, but without conscience. The supreme wish to do right and to mete out simple justice to authorship is wanting. The praise is as valueless as the blame.

The old and fierce personalities of English criticism, which so aroused the ire of Byron, and crushed the spirit of some of his less pugnacious contemporaries, have, in a measure, passed away; but really nothing better in the grand result has taken their place. Men stand together for mutual protection, fully aware that they have nothing to expect of justice and fair dealing by any other means. We do not know why it is that the ordinary courtesies of life are denied to authors more than to painters or sculptors or architects, except, perhaps, that painters and sculptors and architects are not judged by their own co-laborers in art. We presume that these, and that singers and actors would fare badly, if all the criticisms upon them were written by their professional brethren; and this fact suggests the animus of those who criticise current literature. It seems impossible to get a candid and conscientious judgment of a literary man until after

he is dead, and out of the way of all envyings and jealousies and competitions. It seems impossible also, until this event occurs, to separate a man from his works, and to judge them as they stand. There is no good reason, however, for the personal flings dealt out to authors, whose only sin has been a conscientious wish to deserve well of the public, except what is to be found in the meanest qualities of human nature. The lack of personal, gentlemanly courtesy in current criticism is a disgrace to the critical columns of our newspapers and magazines.

The majority of those who write are sensitive to a high degree, and could not possibly be notable writers were they otherwise. They do the best they can, and that which they do is the record of the highest civilization and culture of their country and period. They publish, trembling to think that what they publish is to be pounced upon and picked to pieces like prey. Their best thoughts and best work are not only treated without respect, but they find themselves maligned, cheapened, maliciously characterized, or summarily condemned. All this they are obliged to bear in silence, or suffer the reputation of being 'thin-skinned and quarrelsome.' There is no redress and no defense. They have published a book, in which they have incorporated the results of a life of labor and thought and suffering, with the hope of doing good, and of adding something to the literary wealth of their country; and they have in so doing committed a sin which places them at the mercy of every man who holds a periodical press at his command. It is said that the greatest literary woman living fled her country at the conclusion of that which is perhaps her greatest work, in order to be beyond the reading of the criticisms which the book would call forth. The woman was wise. It was not criticism that she feared: it was the malevolence and injustice of its spirit, to which she would not subject her sensibilities.

There is but one atmosphere in which literature can truly thrive, viz.: that of kindness and encouragement. A criticism from which an author may learn anything to make him better, must be courteous and conscientious. All criticism of a different quality angers or discourages and disgusts him. Our literary men and women are our treasures and our glory. They are the fountain of our purest intellectual delights, and deserve to be treated as such. All that is good in them should have abundant recognition, and all that is bad should be pointed out in a spirit of such friendliness and courtesy that they should be glad to read it and grateful for it. If many of them become morbid, sour, resentful, impatient or unpleasantly self-asserting, it ought to be remembered on their behalf that they have been stung by injustice, and badgered by malice, and made contemptuous by discourteous treatment. It is not unjust to say that all criticism which does not bear the front of personal courtesy and kindness and the warrant of a careful conscience is a curse to literature, and to the noble guild upon which we depend for its production.

THE OLD CABINET.

A Riddle of Lovers.

I.

THERE lived a lady who was lovelier
Than anything that my poor skill may paint,—
Though I would follow round the world till faint
I fell, for just one little look at her.
Who said she seemed like this or that did err :
Like her dear self she was, alone,—no taint
From touch of mortal or of earth ;—blest saint
Serene, with many a faithful worshiper !
There is no poet's poesy would not,
When laid against the whiteness of her meek,
Proud, solemn face—make there a pitiful blot.
It is so strange that I can never speak
Of her without a tear. O, I forgot !
This surely may fall blameless on that cheek !

II.

But of my lady's lovers there were two
Who loved her more than all ; nor she nor they
Thought which of these two loved her best. One
way
This had of loving ; that another knew.
One round her neck brave arms of empire threw,
And covered her with kisses where she lay.
The other sat apart, nor did betray
Sweet sorrow at that sight ; but rather drew
His pleasure of his lady through the soul
And sense of this one. So there truly ran
Two separate loves through one embrace,—the whole
That lady had of both when one began
To clasp her close and win her to love's goal.
Now read my lovers' riddle if you can !

I Will be Brave for Thee, Dear Heart.

I WILL be brave for thee, dear heart ; for thee
My boasted bravery forego. I will
For thee be wise as that wise king, until
That wise king's fool for thy sake I shall be.
No grievous cost in anything I see
That brings thee bliss or only keeps thee still,
In painless peace. So Heaven thy cup but fill,
Be empty mine unto eternity !
Come to me, love, and let me touch thy face !
Lean to me, love, and breathe on me thy breath !
Fly from me, love, to some far hiding-place,
If thy one thought of me or hindereth
Or hurteth thy sweet soul,—then grant me grace
To be forgotten, though that grace be death.

Therefore I Know.

BECAUSE Heaven's cost is Hell, and supreme joy
Hurts as hurts sorrow ; and because we win
No height of grace without the cost of sin,
Or suffering born of sin ; because the alloy
Of blood but makes the bliss of victory brighter ;
Because true worth hath its true proof herein :
That it should be reproached, and called akin
To the evil thing—black making white the whiter :

Because no cost by this were big—that He
Should pay the ransom wherewith we were priced ;
And none could imagine mightier infamy
Than that the God were spit upon—enticed,
By creatures He thus blessed, to that damned tree :
O World ! Therefore I know that Christ is Christ.

What Virtue hath My Voice ?

WHAT virtue hath my voice in this loud choir ?
Against the roaring organ how prevail
That fine, small note of mine ? Above the gale
How may the little linnet's song aspire ?

Hearken and you shall hear, ascending higher :—
Higher and higher, above the rhythmic wail
And heart-break—curse of men ; sobbing of pale,
Fierce women—like up-leaping flame from fire :
Arrowing Heaven's awful silence ; the thick pall
Of the visible earth :—one tear-shrilling, strong cry !
Higher and higher hear it ring and call,
Wild with the world's wild heart of agony—
Till men say, Lo ! We are his children all—
There is a God beyond that brazen sky !

Remember.

BYOND all beauty is the unknown grace ;
Above all bliss a higher ; and above
The lovingest is a more loving love
That shows not the still anguish of its face.
Than death there is a deathlier. Brief space
Behind despair the blacker shadows rove,
Beneath all life a deeper life doth move.
So, friends of mine, when empty is my place,—
For me no more grass grows, dead leaves are stirred,—
And I have ceased my singing, sad or cheerly :
Sweet friends whom I do thank for every word
Of heart-help,—praise or blame,—remember clearly
I asked that 'mid your tears this might be heard :
"For what he never did we love him dearly."

HOME AND SOCIETY.

Picturesque Ladies.

SOME of our modern artists have so refuted by their lives the popular charge against their calling—that it does not develop practical and useful ideas, and that an artist cannot be a good man of business—that we wonder why none of them have yet thought of giving a series of lectures to ladies on dress, beauty, and kindred topics; for such lectures are greatly needed.

On examining a well-executed ideal painting, containing a female figure, we will perceive that there are no incongruities; the subject has been carefully studied in mass and detail; the woman is picturesque because her costume and her surroundings are in harmony with herself, and she is in harmony with them. Her age, too, has been considered.

A young girl is represented in bright tints of delicate material, with airy, graceful outlines, which veil without hiding the rounded contours and free movements of youth; the matron is more richly and gorgeously arrayed, while the redundancy of her body is obscured by the dark colors and long, heavy skirts of her robe; and the aged lady is well wrapped in warm and abundant folds of garments and mantles which hide her bowed and shrunken form. And in well-drawn pictures we find that a woman's hair is arranged to define the natural contour of her head. Then, too, in youth the hair flows backward and downward in waving, curling masses, modestly veiling the virgin shoulders and breast; in mature womanhood it is coiled in flat braids above the forehead and at the back of the head; and in old age a silken hood or a kerchief of lace still follows the natural outline and forms drapery about the shriveled neck.

Why cannot we witness such effects in real life? Why, even if not beautiful, may not women be picturesque? Since any mode that is adopted by common consent becomes fashionable, why should it not be *la mode* to look charming? Our old ladies, for instance—surely no one will believe that they willingly spend time and trouble to make themselves look hideous, and yet what curious sights many of them are, in their stiff puffs and braids of hair, and the bows and ribbons and lace and flowers that form huge towering helmets on the feeble old heads!

How delightful it would be, on calling upon an old lady of seventy, to find her in a quaint old-fashioned room surrounded by mementoes of her life! She is sitting, let us suppose, in a comfortable arm-chair, and if it is winter, before an old-fashioned fire. We observe how naturally and warmly the ample folds of her satin and velvet garments envelop her; how her bony, wrinkled hands are half hidden in her flowing, fur-edged sleeves; how her feet are nestled in easy, fur-bound slippers; how softly the scarf or kerchief of muslin or lace veils her silver hair, and coming down over

her ears keeps them warm. How gentle and peaceful and venerable she looks!

Presently a young girl enters, grandchild of the old lady; so simply graceful in attire and demeanor that we do not observe her dress, nor comment upon herself, until a fashionable young lady friend of hers comes in to make an evening call. Then we contrast these girls; the one in heavy dark silks and velvets, in furs and plumes, that make her appear at least ten years older than she is; and so betrimmed and flounced and ruffled and fringed and puffed, that we cannot tell whether she has the form of a broomstick or of a camel, or how many humps she wears. But we can plainly see that she is high-shouldered and the upper part of her spine distorted, while her feet are deformed by bunions, and her ears pulled out of shape by heavy ear-rings. Her head is made to appear almost twice its natural size; and in addition she has perched a coquettish French bonnet on top of her hair, which makes her look at least six inches taller than any man she walks with, and is, besides, strangely out of keeping with her sentimental, somewhat melancholy face. But, indeed, what can be more incongruous than an average French bonnet with an average American face?

From her we turn and feast our eyes upon the grandchild of our hostess. Her dress seems exactly adapted to herself, though we can scarcely tell what it is. The material is soft and light, and of a dainty blossom color, with here and there a bit of darker ribbon, and a bracelet or two, with perhaps a necklace, and a rosebud in her soft, flowing hair, to match her rosebud lips. Her dress does not appear to be very fashionably made, but it is beautiful, and her friend in most stylish attire appears but a grotesque foil to set off this fair young maiden. Such a young American girl is picturesque.

Even when we saw her later in the evening at a private ball, where her dress was more in conformity with the reigning mode, she was much less conventional and deformed and ridiculous than the other girls, because she made what concessions she dared to grace and naturalness of form, while in color and fitness of material her attire was perfect.

We believe our ladies would dress better if they knew how; that they would not obey the dictates of ignorant, inartistic modistes, either men or women, if they had educated teachers. If they could be fashionable and picturesque both, they would surely prefer it to being fashionable and ugly, or fashionable and vulgar. Many of Worth's designs are shockingly ugly and vulgar to ladies of cultivated tastes, and we cannot refrain from wishing that our artists would give a series of lectures to ladies, their best friends and patrons.

Let the sculptors talk to them of form and the arrangement of drapery, and the painters tell them

about harmonious combinations of colors, and their adaptations to the human form.

As one great and entirely legitimate object of woman's dress is the beautifying of her person, there is no reason why this decoration should not be artistic, and no reason why real ladies should not be as picturesque as the ladies in pictures.

Bring Flowers.

OF course they will be growing in the gardens all summer, and (if we have a garden) we can go there and enjoy them. But this is not enough. We cannot be all the time in the garden, and we ought to have flowers in the house—especially in summer-time, for then they are not only so fresh and beautiful, but so free. We can then have flowers on our tables at every meal, and yet on their account we need not have one pound less of beef-steak, or stint ourselves of a single lump of sugar. But in winter we cannot always be so sure about this—particularly if we feel we need a good many flowers and have to go to the florist's for them.

As to what flowers it is best to bring into the house, and what to do with them after we have them there, we have all heard a great deal, and yet something useful may yet be said, and even if some of us have heard it before it will do no harm—especially if we have forgotten it.

There are in every house a great many places where flowers will look well, but nowhere will they look better than on the table at meal-time. If we have more flowers than we need for that purpose we can put them all around—everywhere.

And it is easy enough to find something to put them in. If vases are not available, a bowl, a plate, a flat dish, or something of the kind will do. If it is not pretty, cover it up with flowers and leaves. Small Ivy-leaves, Geranium-leaves, wood-mosses, and even parsley, and the graceful foliage of the common garden carrot will so cover and adorn the edges and rim of a common soup-plate, that it might as well be a jardinière of Wedgëwood ware, or a vase of Sèvres porcelain, for all we can see of it.

In regard to the flowers—we should be more particular. It will not do to jumble flowers together any way, without regard to form or color, and then expect a beautiful result. Nature never does anything of the kind herself, and her flowers are not intended for such bungling processes. There is scarcely a flower or leaf in the world that cannot be made more beautiful by being placed by some other flower or leaf. It must be remembered that a much more beautiful effect is often produced by a few flowers than by a great mass of them. For instance: for a bouquet in a flat dish, the flowers of the pale-blue Passion-Flower will blend perfectly with an outer wreath of the palest pink Roses, and any deep green foliage will set them off advantageously. If a finger-glass is placed in the middle

of the dish, and a group of flowers arranged in a drooping bouquet over the Passion-Flowers, the effect is quite unique and lovely.

Scarlet and white Geraniums, grouped with mignonne and their own leaves, are exceedingly effective, and the same may be said of China Roses mingled with white and crimson Carnations, with sprigs of Heliotrope dotted hither and thither. Bright pink Roses half blown, and wreathed among Lilies of the Valley partly shrouded under the cool green of their own leaves, make a lovely combination.

The chief thing to attend to, in arranging such dishes of flowers, is to take the shades of colors that suit each other, and not mix purple and blue, scarlet and crimson.

As a general rule, all flowers of thin texture, and particularly those which combine with it a delicate color, are, if gathered, not only a loss to the garden-bed, but of little avail for house use. They are tempting to gather, because their fragile, pale colors look so pretty in the hand and bear close inspection, but they will not add anything to your vase or bouquet; for, being thin and lacking in brilliancy of color, if they do not close by nightfall they will probably fall from the stalk and spoil your arrangement.

For the center of an upright vase of flowers, some grand flower like a Cactus, a Japan Lily, or a Water Lily should be used, or a good cluster of Carnations or Pelargoniums will show well in a central position, with five or six Carnations of various colors around it. If there is much scarlet in the vase, a few yellow-tinged flowers like the sprays of yellow Calceolaria will show to advantage. Often a few clusters of one kind of flower, such as Geraniums, with only their own leaves as a groundwork, will be exceedingly lovely.

White, pink, and crimson roses with their own leaves are extremely beautiful if arranged in one vase; for the great secret in these arrangements is only to seek to fitly display a pretty spray of flowers and foliage, not merely to fill a vase.

In the country, where Fern-leaves abound, there are but few flowers needed to make very lovely bouquets; for if the ferns are lightly grouped together with only a few little flowers they form a more attractive group than they would if crowded into a vase.

Delicate, small flowers mingle better with the fronds of Ferns than the larger and coarser flowers. A vase filled with Ivy branches and only a few clusters of scarlet Geraniums is really exquisite. Verbenas, too, look much prettier if arranged in vases by themselves than if mingled with a variety of flowers.

This style of arrangement may be objected to because one cannot always spare many flowers of any one kind, excepting Verbenas and those that grow *en masse*; but yet only a few flowers are required to make an effective vase, and if there are several vases to fill, the flowers will go much farther if divided or grouped in this way; each vase could take one shade of color, such as pink, *corise*, scarlet, crimson, lilac, etc.

Bankrupt Talkers.

It is almost impossible to mix much in society without meeting a number of unfortunate persons who may be designated as bankrupt talkers. Most of these people started out in social life with high hopes and good prospects; there was no apparent reason why they should not succeed as conversationalists. But they failed. Now, if they want to talk, no one wants to listen; if they do not want to talk, no one regrets their silence. Their remarks are always below par. An offer of them either excites no attention or decided disapprobation.

These bankrupts may be divided into several classes. One class consists of those who do not know how to exhaust or even fully treat a commonplace subject. If they suggest anything in a conversational way or anything is suggested to them, they will say a little about it and then let it drop. To continue the conversation, another subject must be obtained. This is extravagance, and no talker can afford it long. There is hardly anything about which a great deal that is interesting cannot be said, but it often requires skill and address to say it. Still, he who has not that skill is bound to fail as a talker in society. Of course one may have a windfall, and something extraordinary may happen of which a great deal may be said without special effort. But nothing ever happened, which could be satisfactorily talked about all the time.

Not only is it impossible for most persons who are addicted to the incomplete consideration of conversational topics to find subjects enough to last them during an ordinary conversational career, but they will find that people will not care to converse with them even while their stock of subjects holds out. The mind of man naturally revolts against being jumped from one thing to another without having an opportunity to get interested in anything.

Another class of conversational bankrupts are those who never tell anything unless it is very remarkable or striking. Such people are bound ultimately to fail. We are not speaking of persons who draw the "long bow," or anything of that kind. We merely refer to those who, not taking interest in commonplace matters themselves, suppose that nobody else does, and therefore confine their conversation to the discussion of remarkable and uncommon subjects. We knew such a man. He had a fine eye for the peculiar. He noticed it acutely and talked about it well. But he noticed, or at least talked of, nothing else. If a thing was not *very* well worth telling he would not tell it. The consequence of all this was that he soon obtained the reputation of a liar. The common mind could not comprehend how he could become acquainted with so much that was unusual, and so, whenever he opened his mouth people instinctively looked for a "stretcher," to say the least. Had he mingled his strange experiences and observations with a good deal of matter of an ordinary kind he might have been a great conversational success.

Another set of bankrupt talkers owe their ill-fate to their bad habit of offering counterbalancing experiences. No one can even relate an incident but these folks can match it, and, what is worse, can often tell something better. Nothing is more discouraging to a well-organized talker than one of these people. No matter how much pleasure we anticipate—and ought to realize—in telling something novel and interesting, a man of this class will hardly wait until we have finished before he commences to relate the story of which ours has reminded him. Our statement or narration is not only deprived of opportunity of consideration and appreciation, but is crushed and humbled beneath the better story of this inconsiderate person. And it is a melancholy fact that the stories of these people are generally better than ours. It is in fact this fatal excellence which starts them on their road to their ruin.

There are other divisions of the great multitude of society people who have failed as talkers, but we have not room to discuss them here. It is curious, however, to note that there are very few women among these bankrupts. Women are generally not only economical in the use of the odds and ends of conversation, but they make a very good show of them, and often astonish you by presenting you with some of your own ideas, warmed up and served so nicely that you scarcely recognize them. And then, besides the fact that most women have an extensive "sinking fund" on which to draw in times of temporary conversational embarrassment, they would always rather borrow than fail; if they can't talk about a subject themselves they will make others talk, and no one is so successful as a conversationalist as one who makes other people talk.

Art and Furniture.

ON the subject of decorative art as applied to the furnishing of houses, there are almost as many theories as there are furnishers of houses, and in many respects it is well that it is so. If there were a fixed fashion for furniture, and the adornments of our parlors were as uniform as the dress of the gentlemen who fill them on state occasions, we should have no need to trouble ourselves about the relation of art to our furniture. Art and fashion were divorced long ago.

But there are certain artistic principles which should underlie the process of furnishing every house, just as similar principles should underlie the painting of every picture. Be the picture or the house pretentious or humble, cheap or expensive, there is always opportunity for some expression of artistic feeling.

We have not here space to discuss this subject, which will be considered more and more important as civilization advances, but the following extract from a Scotch writer is quite pertinent. He is describing a parlor which had been furnished and decorated with reference to what he considered the proper harmony of color:—

"There were only three decided colors throughout, viz.: white, green, and crimson. The ceiling, cornices, wood-work and canopies of the window-hangings, the ground of the walls and that of the carpet were crimson, while the pattern on the carpet was a sort of tracery of creeping plants in green. The chimney-piece was of white marble reaching nearly to the ceiling, with a panel, equal in width to the opening of the chimney, which was filled with a mirror. The walls of the room were painted in imitation of *mo-roc-cco* leather, enriched with gilded roses shaded by hand, and the whole varnished with copal. The wood-work was dead-white, bordered with gilt mouldings. The window-curtains were simple, being merely large curtains without draperies or fringes, and they hung in vertical lines so as to catch no dust. They ran on gilt wooden poles, and inside the cornice was a common French curtain-rod, on which ran a very fine but plain muslin sun-curtain edged with crimson, cherry fringe. The cords for drawing the curtains, instead of being concealed, were made conspicuous, and contributed to the general effect. The shade of crimson in all the decorations was of the same hue, and, being contrasted with the green and relieved by the white and gold, the coloring imparted a general air of comfort and warmth without being either gaudy or glaring."

Something to the point may here be said about carpets. At a recent "opening" of carpets at one of our large city stores, there was an expensive carpet of particularly gorgeous design—nothing less, in fact, than a "Sunset on the Lake of Como." Whoever treads this carpet may literally walk upon the clouds; he may also contemptuously trample upon the sun, and emulate the feet of St. Peter without wetting the sole of his adventurous shoe. But where is the taste or the sense in spreading a landscape on a parlor floor, where the sofa may dabble its feet in the waters of the lake, where the table may crush out the life of a hapless swan, where a footstool may obliterate the sun, where an easy-chair may break in the palace windows, and where two legs of the piano may rest on a treetop, while the others are peacefully reposing on the back of an agonized deer?

We would add our voices to the few who have already protested against the monstrous designs of broken shields and damaged urns intermixed with dilapidated scrolls and impossible flowers, which have so long disfigured our floors. Let us hope that we may be allowed some really tasteful carpets, of which the design shall be as valuable at least as the material.

But even those who cannot afford rich curtains, and who never go to carpet openings, need not despair of making their homes not only beautiful, but somewhat "stylish," if they take a little trouble. For instance, the handsome *cretonnes* that are now used so generally to cover furniture (and which when discreetly used are very effective and handsome, besides giving an eminently comfortable appearance to the chairs and sofas) will look just as well over common maple or

even pine as over the finest black walnut. Of course much will depend upon the form of the articles covered; but even here a little ingenuity in stuffing and shaping will go a great way, and imperfections of workmanship may be covered by the accommodating *cretonne*. There are even those who, not being able to buy all the furniture they want, make their own chairs, lounges, etc., etc., which, when thus stuffed and covered, are not only serviceable, but often quite shapely and handsome.

Heroism Begins at Home.

WE often hear people speak of a heroic action with a certain surprise at its performance not altogether complimentary to the performer. "He forgot himself," they say; "he surpassed himself;" "he was carried away by a noble impulse." This is not true. A man does not forget himself in emergency; he asserts himself, rather; that which is deepest and strongest in him breaks suddenly through the exterior of calm conventionalities, and for a moment you know his real value; you get a measure of his capacity. But this capacity is not created, as some say, by the emergency. No man can be carried farther by the demands of the moment than his common aspirations and sober purposes have prepared him to go. A brave man does not rise to the occasion; the occasion rises to him. His bravery was in him before—dormant, but alive; unknown perhaps to himself; for we are not apt to appreciate the slow, sure gains of convictions of duty steadily followed; of patient continuance in well-doing; of daily victories over self, until a sudden draft upon us shows what they have amounted to. We are like water-springs, whose pent-up streams rise with opportunity to the level of the fountain-head, and no higher. A man selfish at heart and in ordinary behavior, cannot be unselfish when unselfishness would be rewarded openly. If he will not be unselfish when he ought, he cannot be so when he would. Is it not a question practical for every home: What sort of characters are we, parents and children, forming by every-day habits of thought and action? Emergencies are but experimental tests of our strength or weakness; and we shall bear them, not according to sudden resolve, but according to the quality of our daily living. The oak does not encounter more than two or three whirlwinds during its long life; but it lays up its solid strength through years of peace and sunshine, and when its hour of trial comes it is ready. The children of to-day, protected, cared for now, must soon begin to fight their own battles with the world; nay, more—must *make* the world in which they live. The future America lies in these little hands. They are

"Brought forth and reared in hours
Of change, alarm, surprise."

What shall we do to make them sufficient for the times upon which they have fallen?

CULTURE AND PROGRESS.

The "William Morris Window."

PEOPLE who love beautiful things had a delightful treat a few weeks ago when a church-window from the workshop of Messrs. Morris, Marshall & Co., of London, was exhibited in this city, while waiting until the opening of the Hudson River should permit of its being sent to its destination. It is a memorial window, and is to be placed in the Episcopal church at Saugerties, New York.

We owe it—for do we not all of us share in the ownership of a beautiful thing?—to the wise generosity of the widow and son of the late Judge Vanderpoel, and many a youth and many a maid with a soul tenderly alive and sensitive to ideas of beauty and to religious emotions, will rejoice in time to come, sitting beneath this lovely interpretation of a tale that will never grow old, the beautiful and moving story of the Life of Christ. Some of our readers may not know that the Morris of this celebrated firm of furniture-makers and house-decorators is William Morris the poet, the author of "The Earthly Paradise," and of "The Life and Death of Jason." Mr. Morris, Mr. Dante G. Rossetti, Mr. John P. Seddon, make designs for the furniture, wall-papers, and textile fabrics manufactured by the firm, and the result of their labors has been to bring about a silent but very important revolution in the field of what have been termed the Household Arts. Pugin began this revolution long ago, writing combative essays and books to bring people to a sixteenth-century state of mind, but he was not wholly on the right track, was too fierce and unyielding a medievalist to do as much good as might have been expected from his talents, and the designs he published, as well as those he executed, failed to attract many people, or to set a fashion. Still, as we know, Pugin had an influence, and the ball he set in motion, once it left his hands, was directed by others more original and more poetical than he, into ways more profitable to culture, and more consonant with the spirit of the time.

Some day the inner history of this revival of the Gothic, as it has affected other things beside architecture, will be written more completely than it has been by Eastlake in either of his books. We do not profess to know much about it, and, if we did, this is not the place in which to discuss the matter. We have a notion that some direction may have been given to the movement by the marriage of Mr. D. G. Rossetti into the family of the late Mr. Seddon, the father of the distinguished architect, and of the artist whose untimely death created so wide-spread a sympathy. Mr. Seddon the elder was, we believe, a cabinet-maker. "A carpenter" he would have been called in the honest good old times, and it was natural enough that his son, who entered fully as a rising young architect into the Gothic fight, should have seen that there was

much to be done in the improvement of a craft with which he had had some practical acquaintance. At all events, here was a fortunate conjunction, and hardly a field into which the Arts enter but felt the influence of the new men and women who made up the so-called Pre-Raphaelite group. We believe that the elder Rossetti, author of the commentary on Dante, "Commentario Analitico," of the curious treatise "On the Antipapal Spirit of Dante," and of many lyrical "poems" of great merit, one of the chief literary names in the great movement toward Italian unity—was dead at the time the Pre-Raphaelite movement began with the exhibition of Millais' "Christ in the Carpenter's Shop," but there can be no doubt that the movement owed a vast deal of its intellectual influence to the family he had trained, and that had so deeply partaken of his spirit. Chief of these accomplished children was the artist and poet Dante Gabriel Rossetti; then came Christina, one of the best poets of her time, quite worthy of a place with Tennyson and the Brownings, and of no secondary place either; then there are William Michael Rossetti, the useful but somewhat heavy essayist, and a daughter who has written a valuable guide to the study of Dante. The wife of Dante Rossetti was a lady of remarkable beauty, and inspired much of her husband's best work in poetry and painting. Since she died the beautiful face that looks at us out of Rossetti's pictures is that of Mrs. Morris, the wife of the poet, who himself makes one of the chosen members of this accomplished circle.

They work in many directions—in poetry, in painting, in decorative design, in designs for furniture, and their influence has been widely felt on the arts in England, and even here in America; though, owing to the fact that there are far fewer people among us who unite culture with wealth than there are in England, there has not been the same opportunity for new ideas to tell that is found on the other side the water. A firm in Boston, "Bumstead & Co.," Tremont Street, has taken the American agency for such things as are manufactured by the firm of "Morris, Marshall & Co." for public sale: the wall-papers, tiles, stamped and unstamped velvets, curtain-stuffs, carpets, and the exquisite laces, fringes, tassels, etc., that go with these stuffs, are always to be found well represented in their rooms; but these articles are very expensive, and, going exclusively into rich houses, do not influence the popular taste to any perceptible degree.

Thus far, our public has had only two opportunities to see any of the productions of this English firm outside of the line of their manufactures proper. The church designed by Ware and Van Brunt for the Congregation of the Rev. Rufus Ellis, of Boston, has a small window representing the parable of the Prodigal Son, and now the Vanderpoel Memorial Window

is to be set up in the church at Saugerties. We envy the people of Saugerties their new possession. The Boston window is more quaint, and perhaps has more marked individuality; the compositions suggest less the compositions of other artists who have treated the same themes. But, while there is no straining after novelty in the Saugerties window, there is a remarkable freshness in the way in which the incidents chosen as the subjects of the several compartments are pictured. The plan of the window is a simple parallelogram; the compartments are not divided by tracery, but by simple straight lines forming the stronger portions of the leaden frame-work. The principal subject of the window painting is the "Crucifixion." This takes up the greater portion of the space, and is surrounded by a border made up of parallelograms and squares. Thus there is a square at each angle and a square in the middle of each side. These six squares are filled with subjects drawn from the life of Christ—The Annunciation, The Nativity, The Adoration of the Magi, The Baptism, The Burial, The Meeting of Mary and Jesus in the Garden. In the parallelograms of the border are figures of angels holding scrolls, on which are written texts of Scripture relating to the Passion. This is a cold statement of the arrangement of the window, but it would not be easy to convey an idea of the treatment of these subjects. To state our objection at once will leave plenty of room for unqualified admiration and delight. The principal compartment seems to us the least satisfactory, as indeed might have been expected from the subject. "The Crucifixion, with Mary the Mother of Christ, and St. John the Evangelist,"—a subject that never has been and never can be adequately treated. We consider it a mistake to have made it so prominent—an artistic mistake, we mean, and for these artists in especial whose fortunate field is found in subjects that give scope to their love of beauty and their power of representing it. This subject is the highest tragedy, and their hands fail before it. It is treated with taste, with pious feeling, and with grace; but there is little power in it to move, and the eye is constantly drawn off to the smaller pictures that surround it. The angels holding scrolls are of such poetic beauty, that one has hardly the heart to suggest that they hold the scrolls as if they were heavy, producing an awkward effect. But there is no fault to be found with the six small squares in which the main incidents of the *Lovely Life* are painted with the directness of Giotto, the simple piety of Angelico, and the skill of a later time, with a color that seems a younger child of Venice, but with harmonies all her own.

A work of art so beautiful and so original as this window must exercise no inconsiderable influence on the culture of the people among whom it goes. Happy the children to whom the Sabbath sunlight comes tempered through a screen so painted with sweet pathetic comment on the divine story the preacher reads to them. Here are no formalism, no manufactured sacred wares, no conventional pictures got up to order

to be looked at once and to be straightway forgotten. The art that produced this window is as sincere as it is skillful; nay, the very charm of it is its sincerity; it is a work of the soul.

The National Academy of Design.

WE should not enjoy the task of dissecting the Annual Exhibition of the National Academy of Design for the present year. Though we, who have followed these exhibitions year after year for the past twenty years, have been well able to note their gradual decline in value and in interest,—a decline needing no peculiar acumen to discover, but patent enough to all the world,—yet we can easily believe that the badness of the later ones is not so striking to us as it is to those who come with fresh eyes from Europe, or who, untraveled, go to the Academy from such a picked collection as that of Mr. John Taylor Johnston, or even from Mr. Avery's gallery. Indeed, with any standard in his mind beyond the average, the visitor to these rooms must feel that if there be here any adequate representation of contemporary American art, that art is in a deplorably bad way. But it is certainly not true that contemporary American art is well represented here. It is not represented at all—only a few men of note have sent pictures, and those, with a very few exceptions, not their best, but their poorest. Mr. S. R. Gifford, Mr. R. Swain Gifford, and Mr. Ed. Moran have not forgotten us; Mr. Perry has sent the best pictures he can paint—and very clever pictures they are—and Mr. McEntee has sent two large pictures, one of which is of his usual excellence; but count out these two names, and where are the rest of our well-known men? Where are Church, and Homer, and La Farge, and W. T. Richards, and Frank Mayer, and the Hills, and T. Moran, and the Eastman Johnson that we know—the one we don't know is here—and what is Mr. Henry's clever picture of "City Point" doing in Snedcor's window, when it ought to be in the Academy? Can nothing be done to make the Academy Exhibitions what they once were, a means of judging something of the progress American artists had made in the year? Can nothing be done or said to excite the pride of our artists in their own Academy? Are they quite indifferent to the degradation into which it has fallen? Then it were far better to stop the Exhibitions altogether, and to allow the Academy building to be put to some useful employment. We very well know what are the excuses given by the artists for the decline of the Exhibition. We are told that if an unsold picture is sent to the Academy and is not sold before the Exhibition closes, its chances of finding a purchaser afterward are small. We suppose that since nearly all the artists join in this statement, it must be the result of a wide, common experience. We confess we do not understand why it should be so, and that the fact, if it be a fact, is contrary to human experience in buying and selling other things than pictures, and that what is supposed to be

a law here is not a law in other countries—in England and France, let us say. But, supposing it to be as the artists assert, then why not make up the Exhibitions of pictures that have been sold? why not borrow them of their purchasers, and let the public see them? "Oh," cry out all the artists, with one accord, "people who have bought pictures are hardly ever willing to loan them for exhibition!" One is tempted to shout out with the Hampton students, "Now ain't dat hard!" We can't see our native pictures on any terms. If they are unsold the artists won't show them, and if they are sold the buyers won't show them! What is the result? A few of us, an inconsiderable fraction of the public, do contrive to see, first and last, pretty nearly all the best pictures that are painted from year to year. We go to the studios, we go to the fortunate houses that own them, we see them in the inner rooms of dealers to whom they are sent for sale, or in the gilders' shops where they are being framed. But the great body of the public is deliberately shut off from this means of education and refinement. They see good art scarcely anywhere. There are no pictures nor statues in the churches—even the Catholic Church has abandoned all pretense of playing the rôle she never did really play, that of protectress of the Arts, but builds cathedrals in sham Gothic, with plaster capitals to their columns, and roofs of imitation stone, that "lift their tall heads and lie;" we have few public statues, though in this respect New York is better off than London, or even Paris, for at least three of her half dozen statues are good; we have no public gallery freely open every day to everybody, high and low, rich and poor, where the population from its youth up may become familiar with what art at her best has accomplished,—and of late the only popular school of art-teaching that we had, the Academy, has given up the ghost. We think the artists ought to do something to bring about a different state of things. In our humble opinion, they owe so much as this to the public, to whom they are under moral bonds, as it were, to give them some real return for their assistance in building the Academy building. If the artists are really going to desert the public and foist it off with such a collection of daubs as are the rule of late, we think their conduct has an uncomfortable look of getting the public's money under false pretenses. One doubtful institution like the Artists' Fund Society is enough for a single community,—the Fellowship Fund of the Academy is getting to be too much of a Little Joker for our patience.

For, the truth is, that the excuses we have been considering have very little show of foundation. The artists have it completely in their power to effect a change in the Academy Exhibitions if they choose to do it. Let it be provided in the Constitution that every Academician shall send at least one work to every yearly Exhibition and every Associate two, and let it be simply understood between every artist and his client that the purchased picture shall be at the

artist's disposal for the yearly Exhibition. Is it not clear that if the artists were really in earnest in this matter, the evil the public complains of would soon be remedied? But we see very little to make us believe that the artists are really in earnest. Nay, we see much reason to believe that they are most discreditably indifferent both to the success of the Academy in general and to the yearly Exhibitions in particular.

Reproduction of the Gray Collection.

MESSRS. JAMES R. OSGOOD & CO., of Boston, have undertaken a work that, if successfully carried out, must prove of the greatest importance in the cause of popular Art Education in America. Having purchased the exclusive right for this country to employ the newly invented Heliotype process for the reproduction of engravings, they have asked and easily obtained permission from that thoroughly "live man," President Eliot, of Harvard College, permission to copy all the important works in the Gray Collection of Engravings. Aided by the good taste and scholarly penetration of Mr. George H. Palmer, the Curator of the Gray Collection, the publication has been begun with great spirit, and up to the present time of writing,—the end of April,—there have been nearly fifty plates put out for sale, although the enterprise was only started in March. The prints are sold as cheaply as possible, the prices ranging from thirty cents to one dollar, and the selections are made, not with the intention of pleasing an unformed popular taste by the reproduction of taking subjects and well-known favorites, but with the design to educate the public, to put masterpieces within easy reach, and to trust the power of excellence to make its own way.

A commonplace publisher, bent merely on making money, would have put his faith in commonplace people, who would have urged him to turn the Heliotype to "practical" use by supplying the public with easy things to understand. They would have laughed at the folly of throwing such pearls as Dürer, and Rembrandt, and Marc Antonio, and Lucas Van Leyden before the multitude. But, fortunately, Messrs. Osgood knew where to go for counsel, and are not unskilled in feeling the public pulse; so they determined to begin with the very best things, and the printed list of the first forty subjects printed contains *eleven* Dürers, *five* Rembrandts, *five* Marc Antonios, *three* Lucas Van Leydens, with others by Maso Finiguerra, Andrea Mantegna, Martin Schön, the master of 1466—the curious print of "Solomon adoring the Idols," reproduced by Ottley—Jan Lievens, Parmigianino, Velasquez, Nanteuil, Cornelius Cort, Van Dyck, Annibale Caracci, Guido, and Pieter Tanje.

Since these were published the work has been going steadily on, and the same standard of excellence in the subjects with variety has been followed—the publishers trying all the time to improve the mechanical process so as to turn out the best possible work. Nothing of the sort,—we mean the attempt to supply the public with good copies of the masterpieces of engraving at

the least possible cost,—has ever been attempted, although in France, England, and Germany, there have been no end of costly publications.

The results of this experiment cannot fail to be happy. Already the financial success of it is assured. In one month the students of Cambridge alone bought three thousand copies from about thirty subjects, and the interest still continues unabated. The knowledge of these works,—many of them wonders of skill in execution, others valuable as links in the history of art, others full of food for thought,—has long been confined to scholars and to special students. Of course this cheap reproduction of them by the Helio-type will not have done its best work until it has moved people to find out and to study the originals, of many of which it can, in its present state, give us only a hint; but, meanwhile, the familiar study of these masterpieces by so many fresh, healthy young minds must have a most grateful influence on the culture of the rising generation. New suggestions will be made, new discoveries will appear, a love of art will be shared by more people and will exert its wider, more legitimate influence,—for art is democratic, has always thriven best and touched its highest point when it has worked, not for a few rich men in their houses, but for the world of men in the market-place. No hope for art in America or anywhere till everybody has a chance to see it, and to be influenced by it.

Pelagic Peru.

AMERICAN antiquity has always been a fruitful field of unfruitful speculation. Where did the ancient American races come from? And what was their connection with the races of the old world? The answers have been as numerous almost as the questioners; and so fanciful have they been as a rule that sober-minded people have become a little shy,—to use a financial phrase,—of taking stock in any new theory of American pre-history. Yet it is evident enough that, however obscure their origin, those unique civilizations must have had an origin, and their founders must have been related somehow to the people of Europe and Asia. In view of the late achievements of the immature sciences having to do with linguistics and tradition, is it too much to hope that the mystery of America may yet be solved?

The latest attempts toward such a solution are certainly curious.

For several years an enthusiastic Frenchman has been trying to persuade his acquaintances that he has read the riddle of ancient Peru. Its people were Assyrians, or the Assyrians were Peruvians, or both were offshoots of the same stock, he could not tell which: certainly they were intimately related.

In proof of his assertion, he produced what purported to be a certified copy of a manuscript which he professed to have found in the library of the British Museum, where it had lain unnoticed for two or three hundred years. This manuscript (assuming it to be

genuine) contains an early Spanish account of the Peruvians, illustrated by copies of Peruvian inscriptions, drawings of Temple ornaments, ceremonial observances, and so on. The surprising characteristic of it lies in the fact that these illustrations are marvelously like those given in the works of Layard and other recent explorers of the ruined cities of Assyria. The type of countenance figured on Assyrian monuments is precisely that of the alleged Peruvian drawings. Both records show the same peculiar mode of dressing the hair and beard, the same style of garments, the same style of ornamentation, the same religious symbols and devotional gestures—only the Peruvian designs indicate a ruder stage of art, an earlier stage of national development: as though progress had been arrested in Peru, while in Babylon and Nineveh it had gone on to completion.

Now there comes a Spanish gentleman who argues the same relationship between Persia and Peru, founding his theory on language and tradition. He calls his work *Les Races Aryennes de Pérou*, and essays to prove the occupation of Western South America by an Aryan race who spoke an Aryan dialect, possessed a system of caste like that of India, worshiped in temples of Cyclopean architecture, and whose age antedates the invasion of Europe by the Teutonic or Hellenic offshoot of the original Aryan stock.

The correspondence between the architecture of the Incas and the Cyclopean remains attributed to the Pelasgians in Italy and Greece—"the most remarkable in the history of architecture"—was noticed years ago by Fergusson, who goes on to say that the sloping jambs, the window cornices, the polygonal masonry and other forms of Peruvian architecture, "so closely resemble what is found in the old Pelagic cities of Greece and Italy, that it is difficult to resist the conclusion that there may be some relation between them." Again, it may be observed that the earlier Peruvian remains (see "An Ancient American Civilization" in our issue for April) mark a stage of development lower, and apparently older, than those of the East: for example, that of the Pelagic treasure-house of Atreus.

Our Spanish author, however, finds his strongest proofs of the Aryan relationship of the Ancient Peruvians in their language, supported by their art remains, their legendary records, and the traces of their institutions and religious beliefs which these afford. It certainly requires but little study of the social and religious history of the Peruvians, as exhibited in the legends and traditions collected by Montesinos, to discover many curious parallels with corresponding stages in the development of the Aryan races of Europe and Asia; but that may be no proof of racial alliance.

Señor Lopez goes deeper, and boldly asserts that the Quichua language, which the Incas imposed on their conquered provinces, was an Aryan dialect, arrested in its development before it reached the inflexional stage which characterizes all other known forms of

Aryan speech. How well his comparative tables showing coincidence between Quichua words and Aryan roots will stand the scrutiny of Aryan scholarship remains to be seen. Should his claims be substantiated, and the Quichua language prove to be the missing link marking the transition which Max Müller says must have occurred at some time in the development of inflexional languages, a new impulse will be given, to say the least, to the study of American antiquity.

Tyndall's Lectures.*

THE many who had no opportunity of listening in person to the eloquence of Prof. Tyndall, or of watching his brilliant experimentation, can now repair the first of these losses—at any rate, in part. The printed type, of necessity, does not convey the charm and power of the living presence. Nevertheless, the public will be grateful to the author for leaving behind him, in an authentic form, the six lectures on light with which he delighted so many hearers. They will be the more grateful, if they will reflect that these lectures were "begun, continued, and ended in New York;" that the author had, to begin with, no intention of publishing them; and that they were written amid the press of other engagements and the thousand-fold distractions of his visit to a new and hospitable country. To write them, the author had to sacrifice much of his own pleasure, and the public gain was thus a direct loss to him. What shall we say also of the noble generosity which has prompted him to give back to this country, for the promotion of original scientific research within its borders, the entire sum of money which he had earned by his lectures? One may differ very widely from Prof. Tyndall as regards many of the theoretical opinions which he is known to hold, but his most ardent intellectual opponents must recognize and freely admit that few men are capable of such disinterested and single-minded devotion to the cause of science.

The six lectures comprised in the volume before us cover a vast extent of ground, and may, indeed, be most fairly regarded as a very clear and fascinating hand-book of the laws and phenomena of light. It is hardly necessary for us to disclaim any intention of criticising these lectures. "When kings build, the carters have to work," says an old German proverb: but their work lies in bringing bricks and mortar, and not in appraising the conceptions of the master-mind. It is enough to say that the subject of these lectures is one that has formed a life-study of their writer, and that he is an acknowledged master, both as regards the extent of his knowledge and as regards his power of imparting that knowledge to others. We do not know that anything could be added to this simple statement of facts.

We may be permitted, however, to draw the special attention of our readers to the remarks with which Prof. Tyndall concluded his course of lectures. These remarks refer to a subject upon which much popular misconception exists, and upon which it is most important for the future of the human race that something like a clear conclusion should be arrived at. What, namely, are, or should be, the aims of true science? Science has had to suffer, and still suffers, much from the misconceptions which prevail upon this point in the minds no less of its friends than of its opponents. The friends of science point proudly to the "practical" results of science, and base its claims upon the material benefits which the human race has received at its hands. The enemies of science, on the other hand, point scornfully to what they imagine to be the immense waste of time devoted to the investigation of subjects which have no "practical" bearing, such as what they elegantly denominate "clams and salamanders" or "bugs." Both alike are wrong, though the latter much more seriously so than the former. The railway, the steamboat, the telegraph, chloroform, and the thousand-fold appliances by which human toil is lightened, human pain alleviated, and human life sweetened and elevated, are noble achievements of science, and the world owes them for the most part to men who were content to spend their lives in researches not, upon the face of them, of a "practical" character. Higher and deeper, however, than all the discoveries of science by which modern life has been so immeasurably raised above the life of even the last century, are the incalculable benefits which have accrued to the progress of thought and knowledge from the recent vast development of science. No man now living is in a position to estimate rightly what will be the result, as regards the future of the human race, of the final settlement of such theoretical questions as the nature of life and its connection with the physical forces, the origin of species, the descent of man and his antiquity upon the earth, the laws of health, and the like. Superficial observers are very apt to overlook the importance of these questions, as seeming to have no direct practical bearing upon human life and activity. We hold, however, that the establishment of the doctrine of Evolution, for example, as a truth so undeniable that all men would acknowledge it, would within the next fifty years work more changes in human life than all the practical discoveries of science have produced within the last fifty years. As a matter of course, we hold that the disproof of the doctrine of Evolution, if equally conclusive and generally admitted, and its replacement by some other doctrine, would equally effect the current of human life. Upon the whole, therefore, the claims of science may be based at least as strongly upon what she has done, and is doing, in the world of thought, as upon what she has done, is doing, or may do, in altering the material conditions of man's existence.

* *Lectures on Light. Delivered in the United States in 1872-73.* By John Tyndall, F.R.S. D. Appleton & Co.

Burr's "Pater Mundi."*

THERE is happily yet a large class of cultivated minds, to which the supra-sensual truths of Religion are none the less real because they are not primarily based upon evidence derived from the senses, and are incapable of scientific analysis and treatment. To such minds works like the one at present before us are ever welcome, even though they may not always be without their defects. They are weapons, more or less keen and trenchant, which the Christian can use in the inevitable conflict which arises in every thinking mind, at some period or other of its development, between materialism and spiritualism. In so far as this conflict is a public one, waged not in the inner soul of each individual, but between opposing schools of thought, its intensity varies from century to century, with the set of the intellectual tide at different times, and with the prevailing form of society at each particular epoch. Nevertheless the conflict is a constant one, never entirely absent from the intellectual life of communities, and inevitably demanding its solution in every human soul which is not content to pass its existence in this state of being merely in baking bricks for the Egyptians. Never, perhaps, has this conflict been more hotly carried on than at present; never have so many and such able combatants been arrayed on either side; and never before has public attention been so strongly attracted to the fortunes of the fight. The battle between Materialism and Spiritualism is no sham fight, but is the inevitable result of the psychical development of individuals and peoples; and no one can doubt that its final outcome must in all cases be for good in the long run. This battle, however, is commonly, but erroneously, confounded with what is only in part the same thing—namely, the contest between Science and what is generally called Religion. In part the antagonism which subsists at present between Science and Religion is the antagonism between Materialism and Spiritualism, divesting the latter term of the extraneous and offensive meaning which it has in modern times come unjustly to bear. In so far as this is the case, the issue of the conflict cannot for a moment be doubtful. When Science fights against the primitive and instinctive religious beliefs of mankind, then it is not Science properly so called, and it is fighting against forces immeasurably stronger than itself. But in many cases, what is commonly called the antagonism of Science and Religion may be resolved on careful analysis into an antagonism between Science and that very different thing from Religion, which we know as *Theology*. Theology is but the human interpretation of religious beliefs, and is as much a branch of Science as any other "ology." It is not conceivable, except by those who are willing to believe in human infallibility, that Theology is invariably correct and right in its laws, formule, and con-

clusions. Indeed, no better proof of this is wanted than is afforded by the differences of opinion which subsist between different theological schools. In so far, therefore, as the conclusions of Science may seem to conflict with those of Theology, we may watch the contest, and await the result with comparative calmness; for no victory of natural or physical Science over any given theological dogma would at the bottom touch injuriously the vital truths of Religion.

The first question, then, in any consideration of the now celebrated "doctrine of Evolution" is to decide whether this doctrine is opposed to the fundamental truths of Religion, or merely to certain theological dogmas. This question, we think, Dr. Burr rightly answers by deciding that the hypothesis of Evolution is essentially, and by its own logical necessities, materialistic, unspiritual, and at heart atheistic. It is quite true that the theory of Evolution is not absolutely inconsistent with the belief in a Supreme Being, and that its positive proof would do nothing towards disproving the existence of a great First Cause. Still there cannot be much question but that "both in its practical influence and its logical sequences, it is quite inconsistent with a reasonable faith in the Bible and in God . . . Let men say what they will, Evolutionism means *Materialism*; and so denies to man moral character, responsibility, personal immortality; and so denies the chief use of having a God." We are bound to say that we think Dr. Burr is fully justified by the facts in taking this view of the case, and that, therefore, in common with all the advocates of a Christian philosophy, he is fully justified in combating the doctrine of Evolution with all the weapons at his command.

The present work is a careful analysis of the hypothesis of Evolution, with the view of showing that it is not consonant with known facts, that it deals largely in assumptions, and that it is not the only or the necessary explanation of the facts. Upon the whole, the extensive task thus indicated has been well carried out, and Dr. Burr may be congratulated on having produced a work which may be, and we hope will be, profitably consulted by the numerous inquiring minds which halt dubious and uncertain in the neutral ground between the two great modern schools of thought. In parts, our author rises to the level of true eloquence, whilst his argument generally discloses an acute and subtle mind that has carefully pondered over the question under discussion. In parts, however, the reasoning stumbles under a load of metaphor; whilst there are indications here and there (as in the chapter on Geology) that the writer has not in all cases grasped the full import of the evidence. As an example of the author's style in his happier mood, and as a fair exponent of the method in which he handles his subject, we may direct attention to what he says upon the question of the indefinite variability of species. It is well known that the key to the Darwinian position rests in the assumption that species are capable of indefinite variation, and that no trans-

* *Pater Mundi, or the Doctrine of Evolution*. By Rev. E. F. Burr, D.D., Lecturer on the Scientific Evidence of Religion in Amherst College. Second Series. Noyes, Holmes & Company. 1873.

mutation of species is possible except upon this assumption. Dr. Burr, however, points out that the admission that species are capable of a certain amount of variation by no means proves that such variation may not be perfectly definite and limited by rigid laws. It is quite certain that sooner or later all variations must reach natural limits somewhere, and the question to be solved is where these limits may be. The Darwinians place these limits so far away, as practically to abolish them altogether; but in truth there is reason to believe that every specific type oscillates about a central point, deviating now to one side and now to the other, but always returning in the end to its center of equilibrium. This subject is capably illustrated by Dr. Burr, in a passage we have not room to quote, by a reference to the secular variations of astronomy.

"Lars." *

FROM the remote sphere, peopled with mystical personages, that invited his last poetic experiment, Mr. Taylor descends in this one to common daylight and simple human feeling. With the plain elements of peasant life, thrown into strongly contrasted situations, he has wrought out a very distinct conception of the power in mere goodness to conquer evil in character, and to soften by its example even barbarous national customs. It was a bold attempt to reconcile the extremes of Norse ferocity and Quaker meekness in the same spirit. Yet no miracle is invoked. The transformation proceeds under quiet natural influences; patient toil and womanly tenderness prepare a genuine conversion without religious spasms, until the Berserker fire of the exiled slayer burns in the chastened zeal of the returning missionary.

It is in this psychological study that the real difficulty of the task and the interest of its performance are found. The story moves through a narrow range of events. Lars, a woodman and hunter on the wild Norway heights, is the rival of Per, a blue-eyed masterful sailor, and Brita, the capricious beauty of Ulvik hamlet, lingers in her choice between them until jealousy breaks into deadly strife. In the duel with knives, permitted by savage Norse usage, Per is slain, leaving his enemy to Brita's hatred, who learns her preference too late, and to revenge laid as a duty on the dead man's kindred by the barbarous custom of blood-feud. Lars, seeking an escape, not from them, but from memories of his haunted life, recalls a tradition of his forefathers' emigration, and crosses the sea, to find a home among a community of Friends in Delaware. Renewal of the old strife in his soul, calmed into peace through the ministrations of Ruth, the daughter of the Friend who first gave him shelter, and transition to the quiet content of their marriage, employ the second book of the poem; and the last brings him again with her to Norway, as a preacher of hu-

manity and a reformer of the cruel customs of his kindred. The offered sacrifice of his own life disarms his challenger, the brother of his victim, and his grand courage in rebuke, aided by Ruth's saintly example among the women of the region, checks, if it does not succeed in destroying the traditional vendetta.

This outline of the story suggests its capability of rich illustration. Mr. Taylor has availed himself of this in a masterly manner, borrowing from the pictures long ago laid up in his memory shapes and colors for landscape sketches, and touches of household ways that finish his work in very high relief. Contrast in character between the rude heartiness of Norwegian simplicity and the quaint serenity ingrained in Quaker life is as strongly portrayed as is the difference between the wild fells and blue Scandinavian fiords and the tranquil streams and sunward slopes of Hockessin.

The cool, quiet tone pervading the whole poem is perfect, and its symmetry so complete that the skill of construction almost escapes notice in the harmonious effect. As instances in style of this symmetry, the illustrative comparisons strike us by their accurate keeping, such as the likening of character to the "force of rooted firs that slowly split the stone," or the figure of uncertain hope in one

"who in a land of mist

Feels one side warmer, where the sun must be."

But the art goes deeper than style. Each of the main parts of the poem balances and reflects the other. Continuous life slowly changing, yet the same, for Lars presents in maturer days the softened copy of his fiery early years, the transfigured image of a nature still one in its elements. Love for a woman comes between him and his rival to kindle his Norse blood into fury, as it comes again, grave and tender, to part another quarrel and allay instead of inflaming his spirit. Old age warns Brita out of its little hoard of maxims, and larger, riper experience counsels Ruth. Even the little incidents continue this repetition that sustains identity. The wedding rout at Ulvik shows as a foil to the serene ceremonies among the Friends;—the knife that served Lars' wrath is hurled away in his self-conquest at a later hour of temptation,—the garnet brooch lost in the sea reappears, sparkling among the weedy rocks, binding the distant years together with a link of superstition. This interdependence, skillfully wrought into its various parts, heightens the impression of unity in the poem, while it makes any quotation that could do it justice difficult. And this impression is completed by the sustained evenness of the measure, which is smooth and fluent without pretensions to loftiness, and broken only by a single instance of a careless Alexandrine. As a mere bit of pastoral verse we frankly prefer Mr. Taylor's late stanzas, "John Reed's Thoughts;" but this is something higher and more complete, pastoral in its setting and atmosphere only, but thoughtful, and even tragic, how subdued soever the tone, in its study of the heart and its simple truth of action.

* *Lars: A Pastoral of Norway.* By Bayard Taylor. Osgood & Co. Boston, 1873.

"Memoir of a Brother."

WE all know and love "Tom Hughes." After reading this delightful book we shall know better how he came to be the brave, straightforward, loving, true man he is. This *Memoir of a Brother* (J. R. Osgood & Co.) is a revelation of more lives than one. To us it has been far more a revelation of the father (whose first name even, is not given), than of the son who is its subject. We wish every parent in America would read this book, and ponder well the letters which this father wrote to his boys at school. We do not know anywhere such models. And there is in them all just that certain fine aroma of tender manliness and manly tenderness, of devout simplicity and simple uprightness, without a trace of cant or priggishness, which we have seen reflected in Thomas Hughes, and which we find from this memoir were also reproduced, as such qualities in a father must inevitably be, in the older son George, "the home-loving country gentleman," of whose life this book is a touching record. So touching, indeed, in its unfeigned sorrow and exquisite simpleness of story, that one has almost a sense of intrusion upon a sacred family circle in reading it. Here is a part of one of the elder Hughes's letters to his sons while they were at Rugby.

The boys were in disgrace: a poor image dealer's wares had been taken and set up for "cock-shyes," and the sixth-form boys either could not or would not report the offenders. Dr. Arnold expelled half a dozen or more, among whom was George Hughes.

"I have heard an account of the affair of the images. You should have remembered, as a Christian, that to insult the poor is to despise the ordinance of God in making them so; and moreover, being well-born and well-bred, and having lived in good company at home, which maybe has not been the privilege of all your schoolfellows, you should feel that it is the hereditary pride and duty of a gentleman to protect those who, perhaps, never sat down to a good meal in their lives. It would have been more manly and creditable if you had broken the head of some pompous country booby in your back settlement, than smashed the fooleries of this poor pagan Jew, which were to him both funds and landed estate. This strict truth obliges me to say. Though if you had bought his whole stock to indulge the school with a 'cock-shy,' I should only have said, 'A fool and his money are soon parted.' It is impossible, however, to be angry with you, as you came forward like a lad of spirit and gentlemanly feeling to repair your share, and, perhaps, more than your share, of the damage. The anxiety the poor fellow had suffered you could not make up to him. And it is well that you did make such reparation as you did; had it not been the case, you never would have recovered the place you would have lost in my esteem. Remember this sort of thing must never happen again if you value that esteem. And have no acquaintance you can avoid with the stingy cowards who shirked their share of the

damage; they can be no fit company for you or any gentleman."

And again: "I do not care two straws how you stand in the opinion of Doctor this or Doctor that, provided you deserve your own good opinion as a Christian and a gentleman. And if you only fear God in the true sense, you may snap your fingers at everything else, which ends all I have to say on this point. 'Upright and downright' is the true motto."

The precepts in these letters, true and sound as they are, are the least of the merits. It is the absolute sympathy, the friendly equality of tone. These are what tell on the young. These are what told on George and Thomas Hughes, and again on their children. "From generation unto generation" such heritage passes down.

We have left ourselves little room to speak of the subject of the memoir. Brave, athletic from infancy, riding to the hounds at seven, stroke oar in university races, and never beaten champion in golf at the age of forty-nine. So much for his bravery and bodily strength. And for patience and unselfishness of soul, we have only to note that he sacrificed to the needs of an invalid relative his whole professional career—spending his winters in search of sunny climes to suit the sufferer, and everywhere working quietly and earnestly for the good and the amusement of the community in which he lived. As his brother says in the preface, he was "one of the humblest and most retiring of men, who just did his own duty, and held his own tongue without the slightest effort or wish for fame or notoriety of any kind."

"Memorial of Col. Kitching."

THIS is a book closely of kin to the one just mentioned; a simple unvarnished record of a Christian gentleman's life and death. The purely religious element was far more developed, or we should say, brought to surface and expression in Col. Kitching than in George Hughes. But in simplicity, in unselfishness, they were alike.

Col. Kitching was the Colonel of the 6th New York Artillery, and received in the battle of Cedar Creek the wound from the effects of which he finally died. No more touching records of the emotions and experiences of a young Christian soldier have ever been written, than are to be found in Col. Kitching's letters to his friends.

That there were thousands as brave, as pure as he, who fell in our terrible war, is our best hold of trust for the future of our country. There must be thousands more as brave, as pure to-day, living, as Tom Hughes says, in the preface to his brother's memoir, "their own quiet lives in every corner of the kingdom, bringing up their families in the love of God and their neighbors, and keeping the atmosphere around them clear and pure and strong by their example,—men who would come to the front, and might be relied on in any serious national crisis."

NATURE AND SCIENCE.

Strength of Wood.

PROFESSOR THURSTON reports the results of a series of experiments on the torsion or twisting of various kinds of wood. Among other interesting developments, he relates that black walnut, hickory and locust resist torsion up to a certain point; the resistance then becomes less for a time, when it again increases, passing considerably beyond the first maximum; it then diminishes as the wood slowly twists asunder.

This striking peculiarity, he says, was shown by carefully-repeated experiments to be owing to the fact that in those woods in which it was noticed, the lateral cohesion seemed much less in proportion to the longitudinal strength than in other varieties. Watching the process of yielding under stress, it could be seen by close observation, that, in the examples now referred to, the first maximum was passed at the instant when, the lateral cohesion of the fibers being overcome, they slipped upon each other, and the bundle of these loose fibers readily yielding, the resistance diminished, until, by lateral crowding, further movement was checked, and the resistance rose until the second maximum was reached. Here yielding again commenced, this time by the breaking of the fibers under longitudinal stress, the rupture taking place in the exterior fibers first.

Guns and Gunpowder.

THE problem of delivering the largest possible projectile with the greatest possible velocity, has for years occupied the attention of the ordnance officers of this and other countries. To solve the problem, two courses were open, viz.: either to strengthen the cannon, or to modify the powder so that the cannon might stand the discharge without bursting.

In Europe the first method was adopted, and the cast-iron gun was soon supplanted by wrought-iron and steel. Here, on the contrary, Rodman and others directed their attention to the second method, and devised the mammoth powder which, by burning slowly, should bring the pressure to bear on the projectile gradually. Though the mammoth powder reduced the rapidity of the combustion, the greatest pressure was still exerted when the projectile had moved only a short distance, and necessarily diminished as the shot traversed the remainder of the bore. To attain the desired result successfully, it is necessary to begin with a small surface of combustion, and increase it as the projectile passes along the bore. This it is now proposed to accomplish by making the powder in large prismatic grains with several perforations; thus a small surface would be presented at first, which would rapidly increase as the perforations increased in diameter and surface.

Deterioration in Iron.

In thinking of the disaster to the Steamship Atlantic, many of our readers doubtless recollect the

story of the wreck of the Great Britain on the Irish coast, and how she was cut in two, put together again, and is we believe still running in the Australian trade. Though this power of resistance to violence and also to decay was in part owing to the manner of construction, it is in part to be accounted for by the fact that the iron now made is not as good as it was in those days. An excellent illustration of this fact is furnished by the wear of railroad rails. In 1840, the seventy pound rails of the London and North-Western railroad withstood the passage of 313,000 trains, whereas it is estimated by Mr. Price Williams that the best iron rails now made will not stand the passage of more than 100,000 trains.

The life of a well-made steel rail, on the contrary, exceeds that of the old iron rails as much as the latter exceeds that of modern iron. On the railroad mentioned above, sixteen iron rails have been worn out in succession, while an adjoining steel rail has been worn evenly to a depth of a little more than a quarter of an inch. On the Philadelphia and Baltimore railroad also a good steel rail has outlasted sixteen iron ones, the traffic being the same in both cases.

Errors in Generalization.

IN reviewing Mr. Moggridge's work on Ants and Spiders, Alfred R. Wallace says: "It might have been thought that the habits of European insects were pretty well known, and that a person comparatively new to the subject could not add much to our knowledge. But the fact is quite otherwise, for Mr. Moggridge, in the course of a few winters spent in the south of Europe, has, by careful observation, thrown considerable light on the habits and economy of two important groups of insects, and, as regards one of them, has disproved the dogmatic assertions of several entomologists. Nothing is more curious than the pertinacity with which scientific men will often draw general conclusions from their own special observations, and then use these conclusions to set aside the observations of other men. Mr. Moggridge now confirms, in many of their minutest details, the accounts given by classical writers of the habits of ants. These habits were recorded with so much appearance of minute observation that they bear the impress of accuracy; yet because the ants of England and of Central Europe have different habits, it was concluded that the old authors invented all these details, and that they were at once accepted as truths and became embodied in the familiar sayings of the time. The ants were described as ascending the stalks of cereals and gnawing off the grains, while others below detached the seed from the chaff and carried it home; as gnawing off the radicle to prevent germination, and spreading their stores in the sunshine to dry after wet weather. Latreille, Huber, Kirby, and many less eminent authors treat these statements with con-

tempt, and give reasons why they cannot be true for European species, yet we find them verified in every detail by observations at Mentone and other places on the shores of the Mediterranean."

Curious Customs in the East.

DR. ANDERSON, who accompanied the expedition sent out by the British Government in 1868 to ascertain how far it was possible to open the great highway to China, by the Valley of the Tapeng, to British commerce, makes the following interesting statements, which we extract from a review by John Evans:

The practice of horse-worship in connection with the Buddhism of the Sanda Valley may, however, be noticed, as well as the Shan method of concealment of gold and precious stones, by burying them beneath the skin of their chest and necks, by making slits, through which the coins or stones are forced, and which subsequently heal up. When the valuable object is wanted a second cut is made upon the spot, and it is extracted. In some instances as many as fifteen stones or coins were found to be hidden beneath the skin of men just arrived with a caravan at Mandalay.

Their method of producing fire is very remarkable, and is effected by the sudden and forcible descent of a piston in a closed cylinder. There is a small cup-shaped cavity at the end of the piston-rod, into which a little tinder is inserted. The apparatus is identical in principle with one now employed in the lecture-rooms of our colleges.

Both bronze and stone celt are very common. They are thought to be thunderbolts which have penetrated the earth and afterwards worked their way to the surface. The belief in the celestial origin and healing powers of these implements is as common in Asia as in Europe. They are worn as charms, and carefully kept in small bags; when dipped in water they are supposed to impart curative properties to it, and it is administered as a medicine which is supposed to possess great value, especially in difficult labor cases.

Ancient Monuments.

REGARDING the destruction of such monuments in England a writer in *Nature* says:—"It is perhaps rarely the case that these monuments are destroyed in a merely willful manner; it is usually from economical motives. The barrows offer a mound of soil well adapted as a top dressing to some neighboring field, and there is also the secondary advantage that their site, after the removal of the mound, offers no impediment to the passage of the plough. The stones of the megalithic monuments offer supplies of material both for the purposes of building and the repair of the road in the vicinity. As it was with the Egyptian mummies which Cambyses or time had spared and which avarice now consumeth, so it is with these rude monuments of our forefathers."

The writer, in conclusion, deplores the want of care for these relics of past times, and adds that in France, where a building or other ancient structure is classed

as a historic monument, it is regarded with some degree of pride and affection by those who live near it, and the necessary expenses for the preservation of such monuments are not grudged as they are in England.

Ventilation in the Mont Cenis Tunnel.

THE *Engineering and Mining Journal* states that up to last autumn the tunnel was sufficiently well ventilated; but in the latter part of the autumn frequent and violent barometrical disturbances took place all over central Europe, and it is highly probable that the steady current of air through the tunnel was more than once brought to a stand-still, and even reversed. On one of these occasions, during the first week in December, a goods train stuck fast in the midst of the tunnel because all the *personnel* of the train had fainted in consequence of the vicious air and smoke. This train was met by another goods train coming in the opposite direction, which succeeded in pulling out the first train, when the half-suffocated persons soon recovered their senses.

Memoranda.

A NEW microscope slide for observing the appearances presented by fluids as they circulate through the capillary vessels has been invented by Mr. D. S. Holman. It consists of two shallow cavities on one side of the slide: these are connected by a minute groove. The liquid, *e.g.* blood, milk, &c., to be examined is placed in the shallow cups, and these and the groove are then covered with a piece of thin glass. By pressing on the portion of the glass covering one or the other cavity, the fluid is caused to circulate through the narrow tube, when the movements of its globules or corpuscles may be examined at leisure.

Country post-offices are the centers of information in rural districts. "Old Probabilities," we hear, is about to establish a system of telegraphic communication with these post-offices, and so afford the farmers information which will be of the greatest value in the management of their crops.

Dr. I. Waly finds that glacial acetic acid is an excellent solvent for iodine. On cooling a hot saturated solution, long arrow-headed crystals of iodine separate.

Mr. Paley has sent a communication to the Cambridge Philosophical Society, in which he attempts to show that as the word *Odusseus* signifies "Setting Sun," the *Odyssey* is to be regarded as a solar myth describing the journey of the sun to the west, and his return after many adventures to his bride, Penelope, the spinstress or cloud-weaver in the east.

A bandsaw 55 feet long and 54 inches in width is in successful operation in Philadelphia. Its speed is 4,500 feet per minute. It is said that the blade will follow the curvature of the grain of the lumber, thus combining economy with increased value in the product, especially when it is to be used in ship-building.

The value of the silk raised annually in the United States is from thirty to forty million dollars.

Ruck's process for preparing illuminating gas consists in the decomposition of superheated steam, by coke and iron, at a high temperature, the removal of the sulphur products by oxide of iron and the carbonizing of the gas by rectified petroleum.

It is stated by Willoughby Smith, that under the influence of the light of the sun selenium gradually becomes crystalline. In its vitreous state it is a non-conductor of electricity, but in the crystalline condition it is a conductor.

A rival to the Bessemer cabin has been invented in Russia; in this case the cabin floats in a tank of water instead of resting on a pivot.

The causes of conflagrations in Philadelphia during 1872 are stated by a committee of the Franklin Institute to be as follows:—

Explosion of coal oil and fluid lamps,	59
Carelessness with matches, gas and lamps,	54
Defective stoves, grates and stove-pipes,	51
Incendiary,	35
Spontaneous combustion,	32
Tobacco-pipes and cigars,	24
Defective flues,	23
Fire-works,	20

A French inventor proposes to photograph dispatches to microscopic fineness, and blow them through a tube sunk in the Straits of Dover. When at their destination the dispatches could be enlarged again. By this method long dispatches could be sent about as cheaply and expeditiously as short ones.—(Journal Franklin Institute.)

It is stated that a strong solution of chloride of zinc will dissolve all the silk threads from any textile fabric and leave the cotton threads untouched.

Professor Artus recommends the addition of a little glycerine to the fat employed in greasing leather. The exposure of harness or other articles of leather to ammonia causes them rapidly to become rotten; such articles should therefore be protected from the ammoniacal fumes of stables.

M. L. de Henry suggests the use of a monochromatic soda flame in alkalimetry to determine with greater accuracy the changes of color in litmus paper.

A writer in *The Rural World* says that any fruit-grower can convince himself that stocks influence the character of the fruit: if he will put grafts from one tree into twenty different young trees in his orchard when they come into bearing, he will find that the fruit will be different in all.

By determining the increase in weight of a platform car during a snow storm, it was found that a cubic foot of the ordinary dry snow that falls on a cold day weighs about nine and a half pounds.

Dr. Ranke states that the electric currents in plants correspond in all respects with those in animals.

Mr. Riley thinks that the sulphur found in iron analyses frequently comes from the gas-flames employed in the fusions attending the analysis.

Professor Orton says: The imperfections of the diamond, and in fact of all gems, are made visible by putting them into oil of cassia, when the slightest flaw will be seen.

ETCHINGS.

CAROMEL:

The scintillant zephyrs gleam;
The cloud rides over the rack;
The lightning-rods with cream
Comb their purple tresses back.

Far off in the eye of the wind
Slow thunders rise and set;
Though Moses and Jenny Lind
Sing on their dark duet.

And now through the steeppling storm
The pink-eyed peaks appear,
While mildewed Miss Delorme
Creeps under the fallow-deer.

But down where the fir-trees fume
And the mermaids curl their teeth,
Rath corals glide in gloom,
And the red moon swords its sheath.

TO CATCH A CANARY.

After the Danburian.

AT this season of the year, when it behooves us to scrub and re-gravel our bird-cages, it's more than likely that your canary will get out.

In such a case prompt and decisive action is required. It is useless for the whole family to collect and shout at the canary and make desperate attempts to waft pocket-handkerchiefs over him. Life is too short to be wasted in this way.

And maddened efforts to clap hats over him generally amount to very little, especially when he is up a tree.

And just here we may remark, that there are few methods of taking exercise that may be relied upon to hold out like that of following a loose canary around a village, reaching out at arm's length towards him a good-sized bird-cage, and endeavoring by a series of monotonous and irrelevant chirps to make him believe he wants to go in.

Sugar and cuttle-fish bone, as engines of seduction, are not to be depended upon. The average coaxation into cages by sugar of the ordinary canary of North America is in the proportion of a wheelbarrowful of the one to a feather of the other.

We will also state in this connection that a man with new shoes on, and a big cage in one hand, can furnish an interesting spectacle to over forty bystanders by simply climbing a tree to offer wiry blandishments to an enfranchised canary.

The real way to catch a loose canary, and the only way which can be warranted for a term of years, is to collect all your friends and family and post them around the tree or fence where the canary is at bay. Let them all furnish themselves with plenty of bits of kindling wood, sods of grass, lumps of dirt, hunks of brick, curry-combs, bootjacks, porter-bottles, and other handy missiles, and let them fire away boldly at the canary. If the bird cowardly turns tail and flies off, let everybody follow and slam-bang at him with their utmost vigor. It will be hard to confine this entertainment to your immediate circle. No boy whose heart is in the right place and who has any legs will refrain from the pursuit, and there are men who would leave a dentist's chair to mingle in the fray. There are cases, too, where a funeral would hang by a thread, as it were, in the vicinity of a canary-hunt. Even from the windows of upper rooms, where sickness or disabillie may detain unfortunate enthusiasts, there will come, ever and anon, a frantic wash-bowl or a whizzing lamp-chimney to testify the universality of the public interest. Of course, in this rapid free distribution of fire-wood and paving material, it will not be long before several of your relations will wish they had brought a tin umbrella along. But considerations of mere personal comfort must not be allowed to interfere. If you keep this thing up long enough, and you all fire pretty straight, you'll be sure to get your canary. And then you can have him stuffed. Beautiful glass eyes can be had for twenty cents a pair; but you had better buy your glass eyes by the dozen, for of course you'll soon be getting another canary, so as not to waste the cage.

AFTER THE FAIR.

So Aileen, my darlint, you've been to the Fair,
And its moighty foine times you were havin', my lass,—

It must be I'm leavin' my wits wid 'em there,
Is it talkin' oi am to meself in the glass?

My Larrie came to me—to-morrow's three days—
And says he, very saucy and pert-like, says he,
The lads bid ye come to the Fair, if ye plaze—
Is it dancin' their hearts into shoe-strings ye'll be?

Ah! thin it's themselves must be moindin' their hearts,
But it's very poor shoe-strings I'm thinkin' they'd
make—

It's little I'd see o' the lads o' these parts
The while I'd be dancin' wid Pat o' the Lake.

You're right, lass, meself 'll be seein' ye then,
It's dancin' wid Peggy I'll be, dear, ye know—
Just look at me wance, darlint, don't look again—
For it's jealous you'd be, since your loving me so.

I went to the Fair in a swate satin gown,
But it wasn't wid Pat I was dancin' at all,
But two foreign gentlemen, come from the town,
And wid two powdered heads on them smiling
and tall.



It's Larrie was watching me angrily then,
And says I in his ear, very saucy and low,
"Just look at me wance, darlint, don't look again,
For it's jealous you'd be, since your loving me so."

.....
We stood on the door-stip, my Larrie and me,
And says he, very soft, lookin' up to the skies,
"A moonkey ye're lovin', too mane, dear to be
In the light o' your swate, lovin' beantiful eyes:"

And thin, very hoigh and offended, I said—
"Sure it's stories you're tellin', you niver can
prove,"
And then very soft—"Are you losing your head?
Whist! Larrie, my darlint, it's *yow* that I love!"